

#2

Access DB# 201297

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sim J. Lee Examiner #: \_\_\_\_\_ Date: 9-11-2006  
 Art Unit: 1752 Phone Number 301-21333 Serial Number: 101743441  
 Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

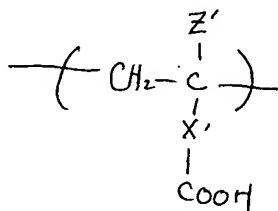
Title of Invention: Plz. see Bib.

Inventors (please provide full names): \_\_\_\_\_

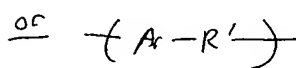
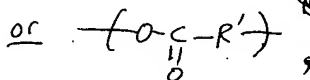
Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for a polymer<sup>^</sup> having the  
 following repeating unit:



of cl. #1  
 (Z' = H or alkyl.)



(Ar = arylene)  
 R' = divalent  
 connecting  
 gp.)

SCIENTIFIC REFERENCE BR  
 Sci & Tech Inf. Cntr.

SEP 12 REC'D

Pat. & T.M. Office

## STAFF USE ONLY

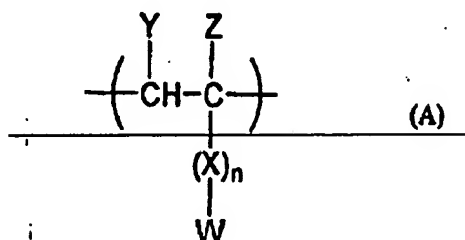
|                                    | Type of Search        | Vendors and cost where applicable |
|------------------------------------|-----------------------|-----------------------------------|
| Searcher: <u>EL</u>                | NA Sequence (#) _____ | STN _____                         |
| Searcher Phone #: _____            | AA Sequence (#) _____ | Dialog _____                      |
| Searcher Location: _____           | Structure (#) _____   | Questel/Orbit _____               |
| Date Searcher Picked Up: _____     | Bibliographic _____   | Dr. Link _____                    |
| Date Completed: <u>9-13-06</u>     | Litigation _____      | Lexis/Nexis _____                 |
| Searcher Prep & Review Time: _____ | Fulltext _____        | Sequence Systems _____            |
| Clerical Prep. Time: _____         | Patent Family _____   | WWW/Internet _____                |
| Online Time: _____                 | Other _____           | Other (specify) _____             |

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application:

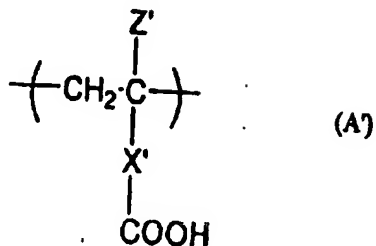
**LISTING OF CLAIMS:**

1. (currently amended): A heat-sensitive lithographic printing plate precursor comprising a support having thereon two image-forming layers each containing a polymer insoluble in water and soluble in an aqueous alkaline solution, wherein an upper layer of the image-forming layers contains a copolymer including a monomer unit represented by formula (A)(A') shown below,

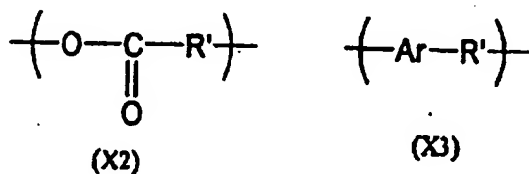


wherein ~~W represents a carboxy group, X represents a divalent connecting group, Y represents a hydrogen atom or a carboxy group, Z represents a hydrogen atom, an alkyl group or a carboxy group, or W and Z or Y and Z may be combined with each other to form an acid anhydride group of (CO) O (CO), and n represents 0 or 1~~

Amendment Under 37 C.F.R. § 1.111  
U.S. Appln. No.: 10/743,441



wherein Z' represents a hydrogen atom or an alkyl group, and X' represents an arylene group, which may have a substituent, or one of the structures represented by formulae (X2) and (X3) shown below,



wherein Ar represents an arylene group, which may have a substituent, and R' represents a divalent connecting group.

Claim 2. (canceled).

3. (original): The heat-sensitive lithographic printing plate precursor as claimed in Claim 1, wherein the copolymer further contains a monomer unit derived from a monomer selected from a (meth)acrylate, a (meth)acrylamide derivative and a styrene derivative.



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22311-1450  
 www.uspto.gov

## \*BIBDATASHEET\*

CONFIRMATION NO. 1762

Bib Data Sheet

|                             |                                       |              |                        |                                  |
|-----------------------------|---------------------------------------|--------------|------------------------|----------------------------------|
| SERIAL NUMBER<br>10/743,441 | FILING DATE<br>12/23/2003<br><br>RULE | CLASS<br>430 | GROUP ART UNIT<br>1752 | ATTORNEY<br>DOCKET NO.<br>Q79134 |
|-----------------------------|---------------------------------------|--------------|------------------------|----------------------------------|

## APPLICANTS

Ikuo Kawauchi, Shizuoka, JAPAN;

Ippei Nakamura, Shizuoka, JAPAN;  
Mitsumasa Tsuchiya, Shizuoka, JAPAN;

\*\* CONTINUING DATA \*\*\*\*\*

None SJL

Fug

\*\* FOREIGN APPLICATIONS \*\*\*\*\*

JAPAN P.2002-382231 12/27/2002 ) SJL  
JAPAN P.2003-020750 01/29/2003 )

IF REQUIRED, FOREIGN FILING LICENSE GRANTED

\*\* 04/03/2004

|   |  |                        |                      |                            |
|---|--|------------------------|----------------------|----------------------------|
| Foreign Priority claimed<br><input checked="" type="checkbox"/> yes <input type="checkbox"/> no   | STATE OR<br>COUNTRY<br>JAPAN               | SHEETS<br>DRAWING<br>0 | TOTAL<br>CLAIMS<br>5 | INDEPENDENT<br>CLAIMS<br>1 |
| 35 USC 119 (a-d) conditions<br>met<br><input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after<br>allowance | EXAMINER'S SIGNATURE<br><i>[Signature]</i> | INITIALS<br>SJL        |                      |                            |
| Verified and<br>Acknowledged  |  |                        |                      |                            |

## ADDRESS

23373  
 SUGHRUE MION, PLLC  
 2100 PENNSYLVANIA AVENUE, N.W.  
 SUITE 800  
 WASHINGTON, DC  
 20037

## TITLE

Heat-sensitive lithographic printing plate precursor

|            |   |   |
|------------|---|---|
| FILING FEE | FEES: Authority has been given in Paper<br>No. _____ to charge/credit DEPOSIT ACCOUNT | <input type="checkbox"/> All Fees<br><input type="checkbox"/> 1.16 Fees ( Filing )<br><input type="checkbox"/> 1.17 Fees ( Processing Ext. of<br>time ) |
|------------|---|---|

=> FILE REG

FILE 'REGISTRY' ENTERED AT 14:45:49 ON 13 SEP 2006  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2006 American Chemical Society (ACS)

=> D HIS

FILE 'HCAPLUS' ENTERED AT 13:48:32 ON 13 SEP 2006

L1 1973 S KAWAUCHI ?/AU  
L2 107488 S NAKAMURA ?/AU  
L3 15009 S TSUCHIYA ?/AU  
L4 4 S L1 AND L2 AND L3  
SEL L4 1-4 RN

FILE 'REGISTRY' ENTERED AT 13:49:22 ON 13 SEP 2006

L5 86 S E1-E86  
E POLYACRYLIC/PCT  
L6 327026 S E3  
L7 70 S L5 AND L6  
L8 70 S L7 AND ACID

FILE 'LREGISTRY' ENTERED AT 13:52:25 ON 13 SEP 2006

L9 STR

FILE 'REGISTRY' ENTERED AT 14:08:06 ON 13 SEP 2006

L10 2 S L9  
L11 SCR 2043  
L12 5 S L9 AND L11

FILE 'LREGISTRY' ENTERED AT 14:18:43 ON 13 SEP 2006

L13 STR L9

FILE 'REGISTRY' ENTERED AT 14:22:03 ON 13 SEP 2006

L14 4 S L13 AND L11  
L15 765 S L13 AND L11 FUL  
SAV L15 LEE441/A

FILE 'LREGISTRY' ENTERED AT 14:27:06 ON 13 SEP 2006

L16 STR L13

FILE 'REGISTRY' ENTERED AT 14:29:48 ON 13 SEP 2006

L17 38 S L16 SSS SAM SUB=L15

FILE 'LREGISTRY' ENTERED AT 14:31:52 ON 13 SEP 2006

L18 STR L16

FILE 'REGISTRY' ENTERED AT 14:32:39 ON 13 SEP 2006

L19 7 S L18 SSS SAM SUB=L15  
L20 160 S L18 SSS FUL SUB=L15  
SAV L20 LEE441A/A

FILE 'HCA' ENTERED AT 14:39:19 ON 13 SEP 2006

L21 114 S L20  
L22 845 S L15  
L23 114389 S LITHO? OR PHOTOLITHO?  
L24 18514 S PRINT?(2A) (PLATE OR PLATES)  
L25 35393 S (HEAT? OR IR OR I(W)R OR INFRARED? OR INFRA(A) (RED OR R  
L26 13 S L21 AND L23  
L27 262 S L22 AND L23  
L28 4 S L21 AND L24  
L29 173 S L22 AND L24  
L30 32 S (L27 OR L29) AND L25  
L31 15 S L26 OR L28  
L32 30 S L30 NOT L31  
L33 14 S L31 AND 1840-2002/PRY,PY  
L34 12 S L32 AND 1840-2002/PRY,PY

FILE 'REGISTRY' ENTERED AT 14:43:46 ON 13 SEP 2006

L35 15 S L15 AND L5

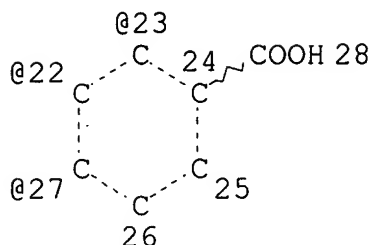
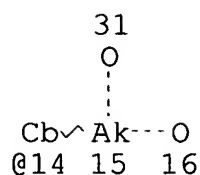
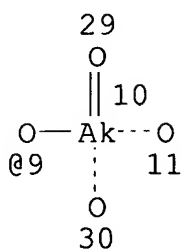
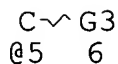
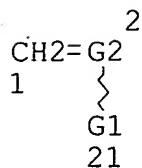
FILE 'HCA' ENTERED AT 14:44:28 ON 13 SEP 2006

L36 12 S L35  
L37 7 S L36 AND (L23 OR L24 OR L25)  
L38 4 S L37 AND 1840-2002/PRY,PY  
L39 18 S L38 OR L33  
L40 10 S L34 NOT L39

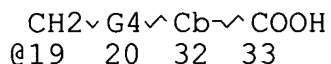
FILE 'REGISTRY' ENTERED AT 14:45:49 ON 13 SEP 2006

=> D L20 QUE STAT

L11 SCR 2043  
L13 STR



Page 1-A



Page 1-B

VAR G1=23/22/27/9/14/19

VAR G2=CH/5

VAR G3=ME/ET/N-PR/I-PR/N-BU/I-BU/S-BU/T-BU

REP G4=(0-5) CH2

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 10

GGCAT IS UNS AT 14

GGCAT IS SAT AT 15

GGCAT IS UNS AT 32

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

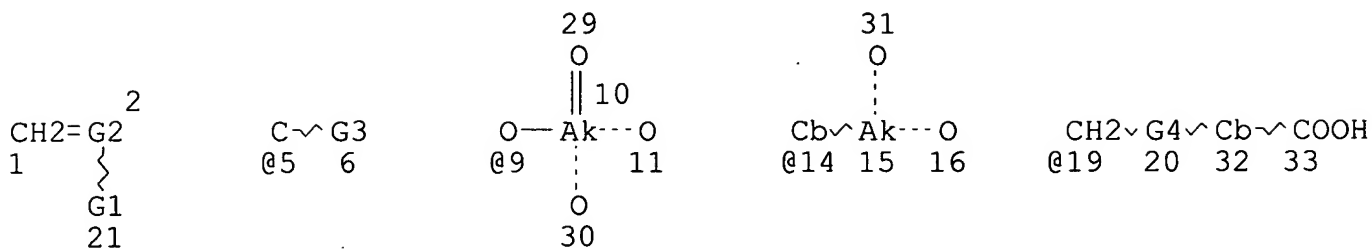
RSPEC I

NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE

L15 765 SEA FILE=REGISTRY SSS FUL L13 AND L11

L18 STR



VAR G1=9/14/19  
 VAR G2=CH/5  
 VAR G3=ME/ET/N-PR/I-PR/N-BU/I-BU/S-BU/T-BU  
 REP G4=(0-5) CH2

# NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
 GGCAT IS SAT AT 10  
 GGCAT IS UNS AT 14  
 GGCAT IS SAT AT 15  
 GGCAT IS UNS AT 32  
 DEFAULT ECLEVEL IS LIMITED  
 ECOUNT IS M2 C AT 15

# GRAPH ATTRIBUTES:

RSPEC I  
 NUMBER OF NODES IS 18

# STEREO ATTRIBUTES: NONE

L20 160 SEA FILE=REGISTRY SUB=L15 SSS FUL L18

100.0% PROCESSED 765 ITERATIONS  
 SEARCH TIME: 00.00.01

160 ANSWERS

=> FILE HCA

FILE 'HCA' ENTERED AT 14:46:11 ON 13 SEP 2006  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> D L39 1-18 CBIB ABS HITSTR HITIND

L39 ANSWER 1 OF 18 HCA COPYRIGHT 2006 ACS on STN  
 141:148156 Method for making **lithographic printing**  
**plates** by direct IR-imaging process. Kawauchi, Ikuo;



Nagase, Hiroyuki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004212649 A2 20040729, 37 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-382229 20021227.

AB The title method includes the steps of: imagewise exposing a **printing plate** precursor having an image-forming layer on a support; and developing the image with an alkali developer, wherein the image-forming layer contains a copolymer of  $\text{CH}_2=\text{C}(\text{R})(-\text{X}-\text{COOH})$  ( $\text{R} = \text{H}$ , alkyl;  $\text{X} = \text{arylene}$ ) and wherein the developer contains an anionic surfactant having sulfonium groups. The method uses decreased exposure energy and generates little residue film in the development.

IT 188601-29-8P 604813-16-3P 604813-18-5P  
604813-19-6P 604813-23-2P

(copolymer, light-sensitive layer of **lithog.**  
**printing plate** precursors)

RN 188601-29-8 HCA

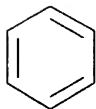
CN Benzoic acid, 4-ethenyl-, polymer with ethenylmethylbenzene (9CI)  
(CA INDEX NAME)

CM 1

CRN 25013-15-4

CMF C9 H10

CCI IDS



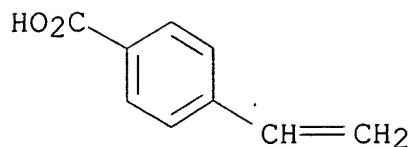
D1-Me

D1-CH=CH<sub>2</sub>

CM 2

CRN 1075-49-6

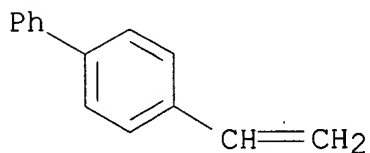
CMF C9 H8 O2



RN 604813-16-3 HCA  
CN Benzoic acid, 4-ethenyl-, polymer with 4-ethenyl-1,1'-biphenyl (9CI)  
(CA INDEX NAME)

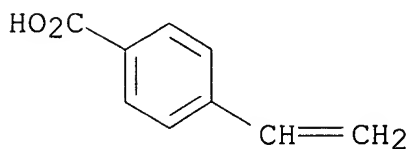
CM 1

CRN 2350-89-2  
CMF C14 H12



CM 2

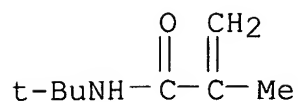
CRN 1075-49-6  
CMF C9 H8 O2



RN 604813-18-5 HCA  
CN Benzoic acid, 4-ethenyl-, polymer with N-(1,1-dimethylethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

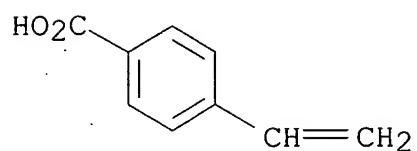
CRN 6554-73-0  
CMF C8 H15 N O



CM 2

CRN 1075-49-6

CMF C9 H8 O2



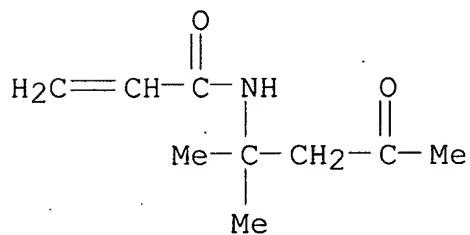
RN 604813-19-6 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 2873-97-4

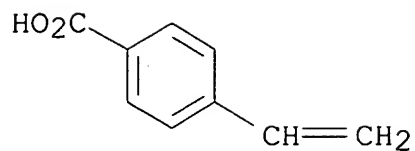
CMF C9 H15 N O2



CM 2

CRN 1075-49-6

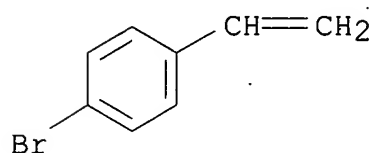
CMF C9 H8 O2



RN 604813-23-2 HCA  
CN Benzoic acid, 4-ethenyl-, polymer with 1-bromo-4-ethenylbenzene and  
N-(1,1-dimethylethyl)-2-propenamide (9CI) (CA INDEX NAME)

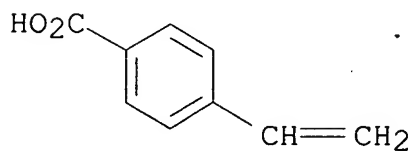
CM 1

CRN 2039-82-9  
CMF C8 H7 Br



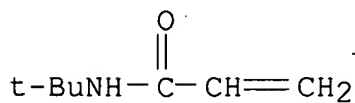
CM 2

CRN 1075-49-6  
CMF C9 H8 O2



CM 3

CRN 107-58-4  
CMF C7 H13 N O



IC ICM G03F007-00  
ICS G03F007-033; G03F007-32  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 35, 46  
ST **lithog printing plate** surfactant  
copolymer  
IT Surfactants  
(anionic; developer for **lithog. printing  
plate**)  
IT **Lithographic** plates  
(method making **lithog. printing  
plates**)  
IT 146115-88-0P 188601-29-8P 604813-16-3P  
604813-18-5P 604813-19-6P 604813-23-2P  
604813-38-9P 604813-40-3P 604813-41-4P 604813-42-5P  
604813-43-6P 604813-44-7P 604813-45-8P 604813-46-9P  
604813-47-0P 604813-48-1P 604813-50-5P 604813-52-7P  
604813-54-9P 604813-55-0P 604813-56-1P 604813-57-2P  
604813-59-4P 604813-60-7P 604813-61-8P 604813-62-9P  
604813-64-1P 604813-65-2P 604813-66-3P 604813-67-4P  
722484-52-8P 722494-08-8P 722494-09-9P  
(copolymer; light-sensitive layer of **lithog.  
printing plate** precursors)  
IT 2386-53-0, Sodium dodecylsulfonate 25638-17-9 27936-45-4  
28519-02-0 51506-28-6 74523-85-6 89788-04-5  
(developer for **lithog. printing plate**  
)

L39 ANSWER 2 OF 18 HCA COPYRIGHT 2006 ACS on STN  
141:131306 **Infrared-sensitive lithographic  
printing plate.** Kawauchi, Ikuo; Nakamura, Ippei  
(Fuji Photo Film Co., Ltd., Japan). U.S. Pat. Appl. Publ. US  
2004137365 A1 20040715 25 pp. (English). CODEN: USXXCO.  
APPLICATION: US 2003-743412 20031223. PRIORITY: JP 2002-382230  
20021227.

AB There is provided an **IR-sensitive lithog  
. printing plate** capable of direct plate-making  
based on digital data from a computer or the like, and excellent in  
development latitude and scratch resistance, which is an **IR  
-sensitive lithog. printing  
plate** comprising a support and a **heat-  
sensitive layer**, the **heat-sensitive**  
layer comprising (A) a copolymer having a specific monomer unit  
having a carboxyl group, (B) an alkali-sol. high mol. wt. compd.  
having a sulfonamide group, and (C) a light-heat conversion  
material.

IT 188601-29-8 604813-16-3 604813-18-5

chk  
D. p.

604813-19-6 604813-23-2  
(IR-sensitive lithog.  
printing plate contg.)

RN 188601-29-8 HCA

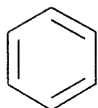
CN Benzoic acid, 4-ethenyl-, polymer with ethenylmethylbenzene (9CI)  
(CA INDEX NAME)

CM 1

CRN 25013-15-4

CMF C9 H10

CCI IDS



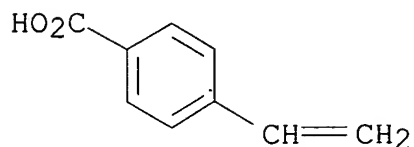
D1-Me

D1-CH=CH<sub>2</sub>

CM 2

CRN 1075-49-6

CMF C9 H8 O2



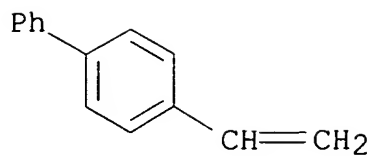
RN 604813-16-3 HCA

CN Benzoic acid, 4-ethenyl-, polymer with 4-ethenyl-1,1'-biphenyl (9CI)  
(CA INDEX NAME)

CM 1

CRN 2350-89-2

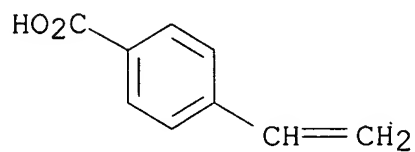
CMF C14 H12



CM 2

CRN 1075-49-6

CMF C9 H8 O2



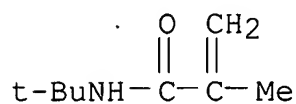
RN 604813-18-5 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(1,1-dimethylethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 6554-73-0

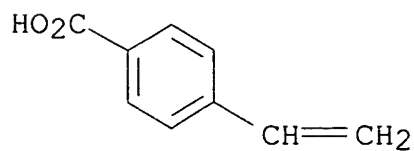
CMF C8 H15 N O



CM 2

CRN 1075-49-6

CMF C9 H8 O2



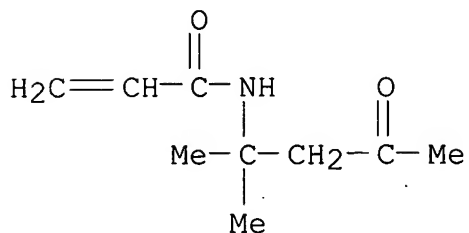
RN 604813-19-6 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 2873-97-4

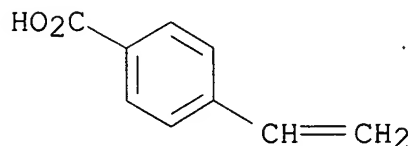
CMF C9 H15 N O2



CM 2

CRN 1075-49-6

CMF C9 H8 O2



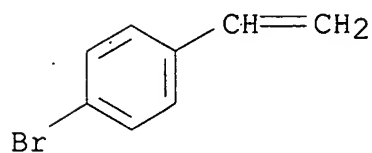
RN 604813-23-2 HCA

CN Benzoic acid, 4-ethenyl-, polymer with 1-bromo-4-ethenylbenzene and N-(1,1-dimethylethyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 2039-82-9

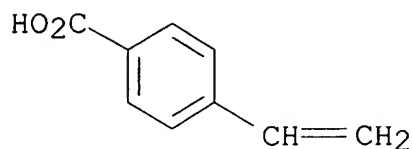
CMF C8 H7 Br



CM 2

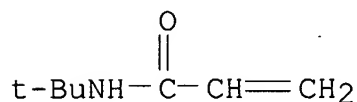


CRN 1075-49-6  
CMF C9 H8 O2



CM 3

CRN 107-58-4  
CMF C7 H13 N O



IC ICM G03F007-039  
INCL 430270100; 430286100; 430302000; 101453000  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38  
ST **IR sensitive lithog printing  
plate**  
IT Dyes  
(IR-absorbing; IR-sensitive  
lithog. printing plate contg.)  
IT **Lithographic plates**  
(IR-sensitive lithog.  
printing plate)  
IT Phenolic resins, uses  
(novolak; IR-sensitive lithog.  
printing plate contg.)  
IT **Printing plates**  
(photosensitive; IR-sensitive lithog  
. printing plate)  
IT 146115-88-0 188601-29-8 604813-16-3  
604813-18-5 604813-19-6 604813-23-2  
604813-38-9 604813-40-3 604813-41-4 604813-42-5 604813-43-6  
604813-44-7 604813-45-8 604813-46-9 604813-47-0 604813-48-1  
604813-50-5 604813-52-7 604813-54-9 604813-55-0 604813-56-1  
604813-57-2 604813-59-4 604813-60-7 604813-61-8 604813-62-9  
604813-64-1 604813-65-2 604813-66-3 604813-67-4 722484-52-8

722494-08-8 722494-09-9

(IR-sensitive lithog.  
printing plate contg.)

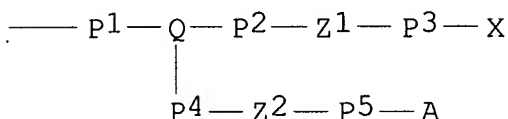
IT 141634-00-6, Acrylonitrile-N-(4-Aminosulfonylphenyl)methacrylamide-methyl methacrylate copolymer

(IR-sensitive lithog.  
printing plate contg.)

L39 ANSWER 3 OF 18 HCA COPYRIGHT 2006 ACS on STN

140:311988 Polymerizable composition for planographic **printing plate**. Kunita, Kazuto; Fujimaki, Kazuhiro (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1403710 A1 20040331, 95 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN: EPXXDW. APPLICATION: EP 2003-21661 20030926. PRIORITY: JP 2002-281557 20020926.

GI



I

AB Disclosed is a photo- or thermo-polymerizable compn. including an alkali-sol. polymerizable polymer that contains a structure on a side chain represented by the following general formula I (X = polymerizable group; A = alkali-sol. group; Q = hydrocarbon linking group, heteroring; Z1, Z2 = single bond, hydrocarbon linking group; P1-P5 = single bond, H, N, O, S, carbonyl). The present invention provides photo- or thermo-polymerizable compns. in which a curing reaction occurs and proceeds with high sensitivity and an obtained cured film is excellent in hardness and storage stability. The invention also provides photo- or thermo-polymerizable compns. as a recording layer of a planog. **printing plate** precursor that can be recorded with high sensitivity by using IR laser exposure, and is excellent in press life and storage stability.

IT 676448-71-8

(polymerizable compn. for planog. **printing plate**)

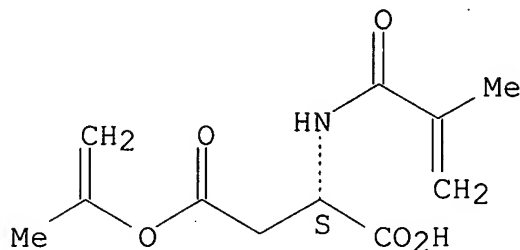
RN 676448-71-8 HCA

CN L-Aspartic acid, N-(2-methyl-1-oxo-2-propenyl)-, 4-(1-methylethenyl) ester, polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 676448-70-7  
 CMF C11 H15 N O5

Absolute stereochemistry.



CM 2

CRN 108-05-4  
 CMF C4 H6 O2

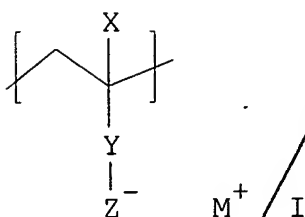
AcO-CH=CH2

IC ICM G03F007-038  
 ICS G03F007-033; B41C001-10; B41M005-40  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST planog **printing plate** polymerizable compn  
 IT **Printing plates**  
 (planog.; polymerizable compn. for planog. **printing plate**)  
 IT 676448-52-5P 676448-54-7P 676448-61-6P 676448-65-0P  
 (polymerizable compn. for planog. **printing plate**)  
 IT 4986-89-4 29570-58-9 40220-08-4 293329-25-6 305369-31-7  
 500769-71-1 676448-56-9 676448-58-1 676448-60-5 676448-63-8  
 676448-67-2 676448-69-4 **676448-71-8** 676448-73-0  
 676448-74-1 676448-76-3 676448-78-5 676448-80-9 676448-82-1  
 676448-84-3 676448-85-4 676448-87-6 676448-89-8  
 (polymerizable compn. for planog. **printing plate**)  
 IT 50512-48-6P 53193-87-6P 676448-50-3P 676448-83-2P  
 (prepn. of polymerizable polymer for planog. **printing plate**)

IT 65-49-6, 4-Aminosalicylic acid 89-57-6, 5-Aminosalicylic acid  
 106-91-2, Glycidyl methacrylate 920-46-7, Methacrylic acid  
 chloride 6674-22-2, 1,8-Diazabicyclo[5,4,0]-7-undecene  
 20769-85-1 213453-08-8  
 (prepn. of polymerizable polymer for planog. **printing**  
**plate**)

L39 ANSWER 4 OF 18 HCA COPYRIGHT 2006 ACS on STN  
 140:294803 Polymerizable composition for planographic **printing**  
**plate** precursor. Shimada, Kazuto; Goto, Takahiro (Fuji  
 Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1400851 A2  
 20040324, 117 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES,  
 FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK,  
 CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN: EPXXDW.  
 APPLICATION: EP 2003-19700 20030910. PRIORITY: JP 2002-265466  
 20020911; JP 2002-265467 20020911; JP 2002-283912 20020927.

GI



AB The present invention provides a neg. type planog. **printing**  
**plate** precursor comprising polymerizable compn. that  
 includes a compd. having polymerizable unsatd. group, and a  
 macromol. compd. having at a side chain a structure represented by  
 the general formula I (Z- = COCOO-, COO-, SO3-, SO2-N--R, R =  
 monovalent org. group; M+ = onium cation; X = H, OH, urethane, urea,  
 halogen, amino, amide, sulfonyl, sulfonate, monovalent org. group; Y  
 = divalent org. connecting group; n = 0 or 1). The present  
 invention provides a neg. type planog. **printing**  
**plate** precursor responsive to an IR laser, the precursor  
 being superior in recording sensitivity and printing durability.

IT **675140-80-4P**  
 (polymerizable compn. for planog. **printing**  
**plate** precursor)

RN 675140-80-4 HCA

CN Sulfonium, bis(4-chlorophenyl)(4-methylphenyl)-, salt with  
 4-ethenyl- $\alpha$ -oxobenzeneacetic acid (1:1), homopolymer (9CI)  
 (CA INDEX NAME)

CM 1

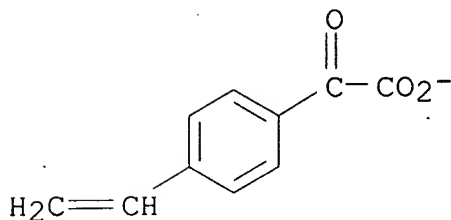
CRN 676596-24-0

CMF C19 H15 Cl2 S . C10 H7 O3

CM 2

CRN 675140-79-1

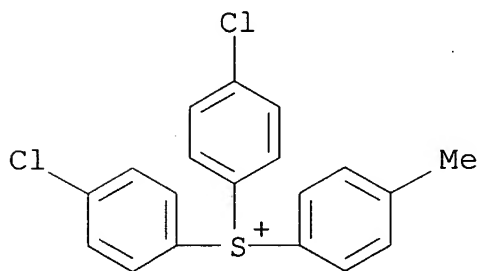
CMF C10 H7 O3



CM 3

CRN 667888-57-5

CMF C19 H15 Cl2 S



IC ICM G03F007-029

ICS B41M005-40; B41C001-10

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST planog **printing plate** neg precursor  
polymerizable compn IRIT **Printing plates**(planog.; polymerizable compn. for planog. **printing plate** precursor)IT 675140-73-5P 675140-75-7P 675140-77-9P **675140-80-4P**

675140-86-0P 675140-88-2P

(polymerizable compn. for planog. **printing plate** precursor)

- IT 67653-78-5P, Dipentaerythritol hexaacrylate, homopolymer  
675140-89-3P 675140-90-6P  
(polymerizable compn. for planog. **printing**  
**plate precursor**)
- IT 183745-11-1 675140-91-7 675140-93-9 675140-95-1 675140-97-3  
(polymerizable compn. for planog. **printing**  
**plate precursor**)
- IT 675140-78-0P 675140-81-5P 675140-83-7P  
(prepn. of macromol. compd. for planog. **printing**  
**plate precursor**)
- L39 ANSWER 5 OF 18 HCA COPYRIGHT 2006 ACS on STN  
139:277482 Acrylic and cresol novolak resin comprising  
infrared-photosensitive composition with improved latitude and press  
life. Serikawa, Takeshi; Kawauchi, Ikuo; Tsuchiya, Mitsumasa;  
Nakamura, Ippei (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl.  
EP 1347014 A2 ~~20030324~~, 35 pp. DESIGNATED STATES: R: AT, BE, CH,  
DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV,  
FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN:  
EPXXDW. APPLICATION: EP 2003-6180 20030319. PRIORITY: JP  
2002-77817 20020320; JP 2002-81044 20020322.
- AB An **IR-sensitive** photosensitive compn.  
comprising: (A) a resin; (B) a novolak resin; and (C) a  
light-to-heat converting substance, wherein the resin (A) has, as  
copolymer components, at least: (1) a (meth)acrylic acid or a  
monomer represented by formula (I) as defined herein; and (2) at  
least one compd. selected from the group consisting of a  
(meth)acrylic ester, a (meth)acrylamide deriv., and a styrene deriv.
- IT **28854-57-1**, Methyl methacrylate-4-vinylbenzoic acid  
copolymer **188601-29-8 604813-16-3**,  
4-Phenylstyrene-4-vinylbenzoic acid copolymer **604813-17-4**,  
4-Chloro- $\alpha$ -methylstyrene-4-vinylbenzoic acid copolymer  
**604813-18-5 604813-19-6 604813-20-9**,  
N,N-Dimethylmethacrylamide-4-vinylbenzoic acid copolymer  
**604813-21-0**, N-Phenylmethacrylamide-4-vinylbenzoic acid  
copolymer **604813-22-1**, N-[3-(Dimethylamino)propyl]acrylami  
de-4-vinylbenzoic acid copolymer **604813-23-2**,  
4-Bromostyrene-N-tert-butylacrylamide-4-vinylbenzoic acid copolymer  
**604813-68-5**, 2-Fluorostyrene-N-tert-butylacrylamide-4-  
vinylbenzoic acid copolymer **604813-69-6**,  
2-Fluorostyrene-N-(butoxymethyl)acrylamide-4-vinylbenzoic acid  
copolymer **604813-70-9**, 3-Chlorostyrene-N-  
(butoxymethyl)acrylamide-4-vinylbenzoic acid copolymer  
**604813-71-0**, 4-Chlorostyrene-N-(butoxymethyl)acrylamide-4-  
vinylbenzoic acid copolymer **604813-72-1**,  
4-Fluorostyrene-N-(butoxymethyl)acrylamide-4-vinylbenzoic acid  
copolymer  
(acrylic and cresol novolak resin comprising IR-photosensitive
- 2 Layers*  
?

compn. with improved latitude and press life)

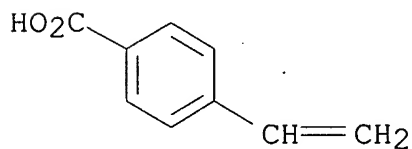
RN 28854-57-1 HCA

CN Benzoic acid, 4-ethenyl-, polymer with methyl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 1075-49-6

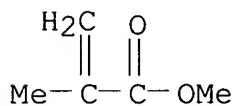
CMF C9 H8 O2



CM 2

CRN 80-62-6

CMF C5 H8 O2



RN 188601-29-8 HCA

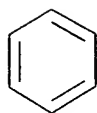
CN Benzoic acid, 4-ethenyl-, polymer with ethenylmethylbenzene (9CI)  
(CA INDEX NAME)

CM 1

CRN 25013-15-4

CMF C9 H10

CCI IDS



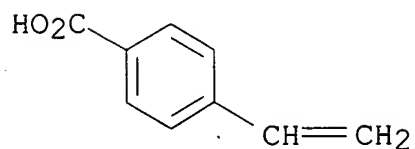
D1-Me

D1-CH=CH<sub>2</sub>

CM 2

CRN 1075-49-6

CMF C9 H8 O2



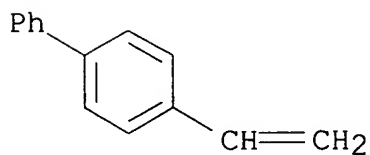
RN 604813-16-3 HCA

CN Benzoic acid, 4-ethenyl-, polymer with 4-ethenyl-1,1'-biphenyl (9CI)  
(CA INDEX NAME)

CM 1

CRN 2350-89-2

CMF C14 H12

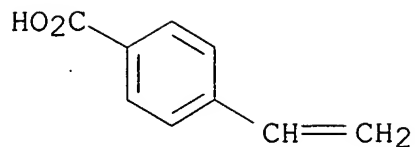


CM 2

CRN 1075-49-6

CMF C9 H8 O2

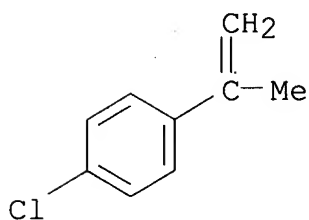




RN 604813-17-4 HCA  
CN Benzoic acid, 4-ethenyl-, polymer with 1-chloro-4-(1-methylethenyl)benzene (9CI) (CA INDEX NAME)

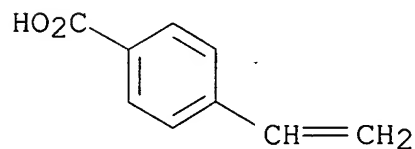
CM 1

CRN 1712-70-5  
CMF C9 H9 Cl



CM 2

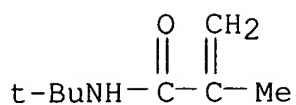
CRN 1075-49-6  
CMF C9 H8 O2



RN 604813-18-5 HCA  
CN Benzoic acid, 4-ethenyl-, polymer with N-(1,1-dimethylethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

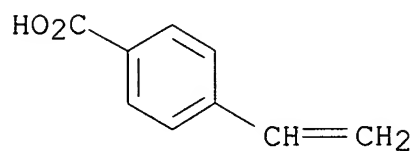
CRN 6554-73-0  
CMF C8 H15 N O



CM 2

CRN 1075-49-6

CMF C9 H8 O2



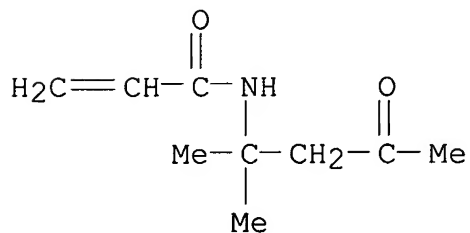
RN 604813-19-6 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 2873-97-4

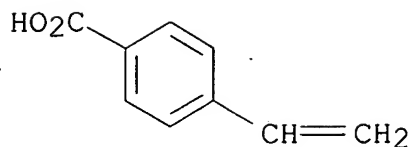
CMF C9 H15 N O2



CM 2

CRN 1075-49-6

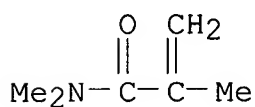
CMF C9 H8 O2



RN 604813-20-9 HCA  
 CN Benzoic acid, 4-ethenyl-, polymer with N,N,2-trimethyl-2-propenamide  
 (9CI) (CA INDEX NAME)

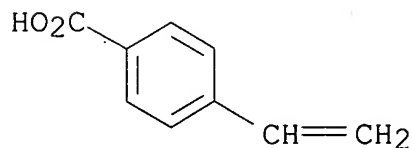
CM 1

CRN 6976-91-6  
 CMF C6 H11 N O



CM 2

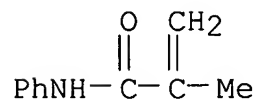
CRN 1075-49-6  
 CMF C9 H8 O2



RN 604813-21-0 HCA  
 CN Benzoic acid, 4-ethenyl-, polymer with 2-methyl-N-phenyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

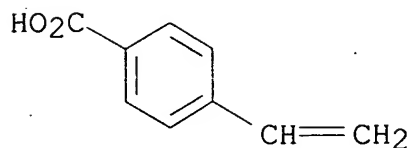
CRN 1611-83-2  
 CMF C10 H11 N O



CM 2

CRN 1075-49-6

CMF C9 H8 O2



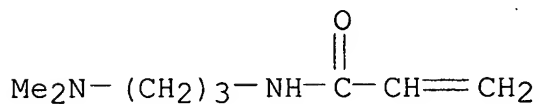
RN 604813-22-1 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-[3-(dimethylamino)propyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 3845-76-9

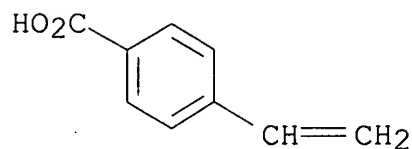
CMF C8 H16 N2 O



CM 2

CRN 1075-49-6

CMF C9 H8 O2



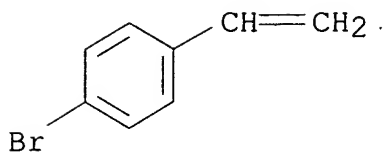
RN 604813-23-2 HCA

CN Benzoic acid, 4-ethenyl-, polymer with 1-bromo-4-ethenylbenzene and N-(1,1-dimethylethyl)-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 2039-82-9

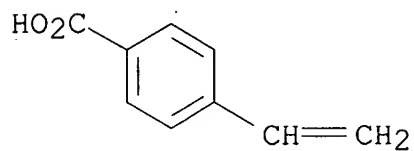
CMF C8 H7 Br



CM 2

CRN 1075-49-6

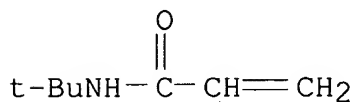
CMF C9 H8 O2



CM 3

CRN 107-58-4

CMF C7 H13 N O



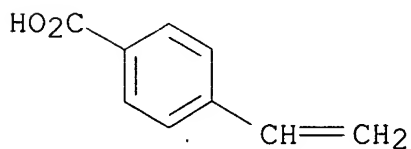
RN 604813-68-5 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(1,1-dimethylethyl)-2-propenamide and 1-ethenyl-2-fluorobenzene (9CI) (CA INDEX NAME)

CM 1

CRN 1075-49-6

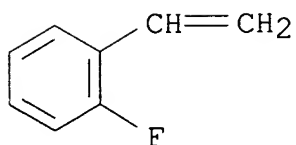
CMF C9 H8 O2



CM 2

CRN 394-46-7

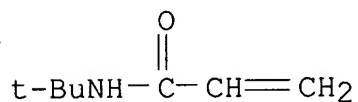
CMF C8 H7 F



CM 3

CRN 107-58-4

CMF C7 H13 N O



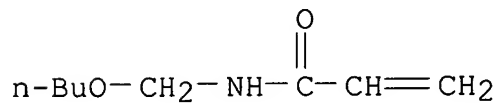
RN 604813-69-6 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(butoxymethyl)-2-propenamide and 1-ethenyl-2-fluorobenzene (9CI) (CA INDEX NAME)

CM 1

CRN 1852-16-0

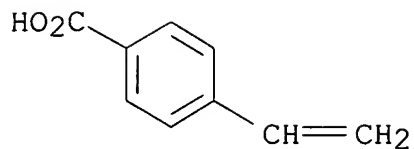
CMF C8 H15 N O2



CM 2

CRN 1075-49-6

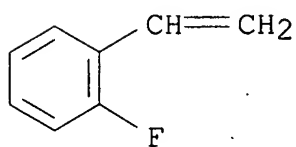
CMF C9 H8 O2



CM 3

CRN 394-46-7

CMF C8 H7 F



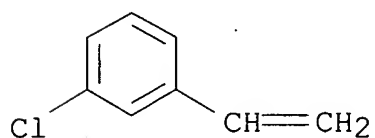
RN 604813-70-9 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(butoxymethyl)-2-propenamide and 1-chloro-3-ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 2039-85-2

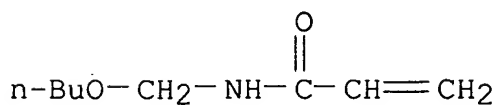
CMF C8 H7 Cl



CM 2

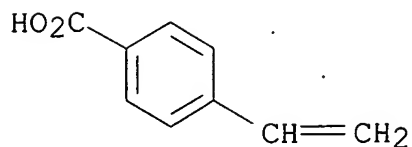
CRN 1852-16-0

CMF C8 H15 N O2



CM 3

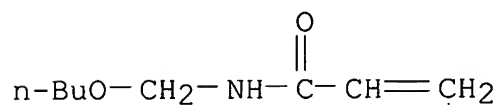
CRN 1075-49-6  
CMF C9 H8 O2



RN 604813-71-0 HCA  
CN Benzoic acid, 4-ethenyl-, polymer with N-(butoxymethyl)-2-propenamide and 1-chloro-4-ethenylbenzene (9CI) (CA INDEX NAME)

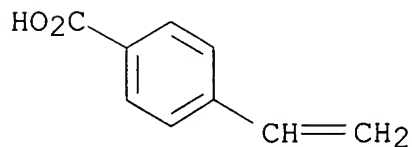
CM 1

CRN 1852-16-0  
CMF C8 H15 N O2



CM 2

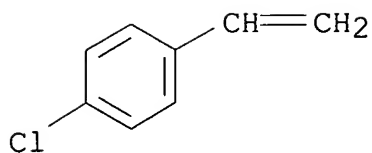
CRN 1075-49-6  
CMF C9 H8 O2



CM 3

CRN 1073-67-2  
CMF C8 H7 Cl





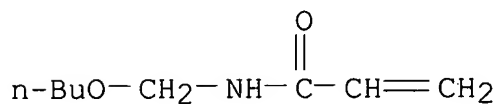
RN 604813-72-1 HCA

CN Benzoic acid, 4-ethenyl-, polymer with N-(butoxymethyl)-2-propenamide and 1-ethenyl-4-fluorobenzene (9CI) (CA INDEX NAME)

CM 1

CRN 1852-16-0

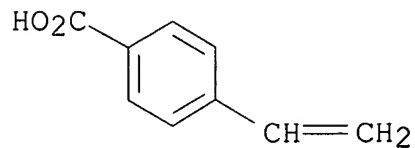
CMF C8 H15 N O2



CM 2

CRN 1075-49-6

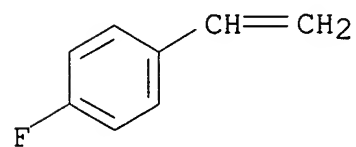
CMF C9 H8 O2



CM 3

CRN 405-99-2

CMF C8 H7 F



IC ICM C08L061-06

ICS C08L033-00; B41M005-36; G03F007-038  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 74  
ST novolak acrylic resin IR photosensitive compn **lithog** plate  
precursor  
IT **Lithographic** plates  
(pos., precursors; acrylic and cresol novolak resin comprising  
IR-photosensitive compn. with improved latitude and press life)  
IT 79-10-7D, Acrylic acid, esters, polymers 79-41-4D, Methacrylic  
acid, esters, polymers 9016-83-5, Cresol-formaldehyde copolymer  
**28854-57-1**, Methyl methacrylate-4-vinylbenzoic acid  
copolymer 146115-88-0 **188601-29-8 604813-16-3**,  
4-Phenylstyrene-4-vinylbenzoic acid copolymer **604813-17-4**,  
4-Chloro- $\alpha$ -methylstyrene-4-vinylbenzoic acid copolymer  
**604813-18-5 604813-19-6 604813-20-9**,  
N,N-Dimethylmethacrylamide-4-vinylbenzoic acid copolymer  
**604813-21-0**, N-Phenylmethacrylamide-4-vinylbenzoic acid  
copolymer **604813-22-1**, N-[3-(Dimethylamino)propyl]acrylami  
de-4-vinylbenzoic acid copolymer **604813-23-2**,  
4-Bromostyrene-N-tert-butylacrylamide-4-vinylbenzoic acid copolymer  
604813-24-3, 4-Carboxymethoxystyrene-methylstyrene copolymer  
604813-25-4, 4-Carboxymethoxystyrene-4-phenylstyrene copolymer  
604813-26-5, 4-Carboxymethoxystyrene-N-tert-butylacrylamide  
copolymer 604813-27-6, 4-Carboxymethoxystyrene-N-tert-  
butylmethacrylamide copolymer 604813-28-7, 4-Carboxymethoxystyrene-  
N-[3(dimethylamino)propylacrylamide copolymer 604813-29-8,  
4-Carboxymethoxystyrene-methylstyrene-N-tert-butylacrylamide  
copolymer 604813-30-1, 4-Carboxymethoxystyrene-chloromethylstyrene-  
N-tert-butylmethacrylamide copolymer 604813-31-2,  
4-Carboxymethoxystyrene-4-chloro- $\alpha$ -methylstyrene-N,N-  
dimethylacrylamide copolymer 604813-32-3, 4-Carboxymethoxystyrene-  
4-chloro- $\alpha$ -methylstyrene-N-[3-(dimethylamino)propyl]acrylamide  
copolymer 604813-33-4, 4-Carboxymethoxystyrene-4-chloro- $\alpha$ -  
methylstyrene-methyl acrylate-N-[3-(dimethylamino)propyl]acrylamide  
copolymer 604813-34-5, 4-Carboxymethoxystyrene-4-chloro- $\alpha$ -  
methylstyrene-methyl methacrylate-N,N-dimethylacrylamide copolymer  
604813-35-6, 4-Carboxymethoxystyrene-chloromethylstyrene-ethyl  
methacrylate-N,N-dimethylacrylamide copolymer 604813-36-7,  
4-Carboxymethoxystyrene-methyl methacrylate copolymer 604813-38-9  
604813-40-3 604813-41-4 604813-42-5 604813-43-6 604813-44-7  
604813-45-8 604813-46-9 604813-47-0 604813-48-1 604813-49-2  
604813-50-5 604813-52-7 604813-54-9 604813-55-0 604813-56-1  
604813-57-2 604813-58-3 604813-59-4 604813-60-7 604813-61-8  
604813-62-9 604813-63-0 604813-64-1 604813-65-2 604813-66-3  
604813-67-4 **604813-68-5**, 2-Fluorostyrene-N-tert-  
butylacrylamide-4-vinylbenzoic acid copolymer **604813-69-6**,  
2-Fluorostyrene-N-(butoxymethyl)acrylamide-4-vinylbenzoic acid  
copolymer **604813-70-9**, 3-Chlorostyrene-N-

(butoxymethyl)acrylamide-4-vinylbenzoic acid copolymer  
**604813-71-0**, 4-Chlorostyrene-N-(butoxymethyl)acrylamide-4-  
vinylbenzoic acid copolymer **604813-72-1**,  
4-Fluorostyrene-N-(butoxymethyl)acrylamide-4-vinylbenzoic acid  
copolymer

(acrylic and cresol novolak resin comprising IR-photosensitive  
compn. with improved latitude and press life)

L39 ANSWER 6 OF 18 HCA COPYRIGHT 2006 ACS on STN

137:255194 Design and syntheses of mass persistent photoresists.

Pinnow, Matthew J.; Noyes, Ben F., III; Tran, Hoang V.; Tattersall,  
Peter I.; Cho, Sungseo; Klopp, John M.; Benschel, Nicolas; Frechet,  
Jean M. J.; Sanders, Daniel P.; Grubbs, Robert H.; Willson, C. Grant  
(Department of Chemistry, University of Texas at Austin, Austin, TX,  
78712, USA). PMSE Preprints, 87, 403-404 (English) **2002**.

CODEN: PPMRA9. ISSN: 1550-6703. Publisher: American Chemical  
Society.

AB The authors describe their study to design a "mass persistent"  
resist that undergoes an acid catalyzed polarity switch without the  
intentional release of volatiles. The authors used the following  
process: design soly. switching group, synthesize model compds.,  
test model compds. for functionality, synthesize "mass persistent"  
polymer and then do **lithog.** evaluation. This paper  
presents the authors progress in developing the "mass persistent"  
resist.

IT **460998-99-6P**

(**lithog.** evaluation of copolymers of  
hexafluoroacetone styrene and  $\beta$ -lactone styrene for  
photoresists which undergo acid catalyzed polarity switch without  
release of volatiles)

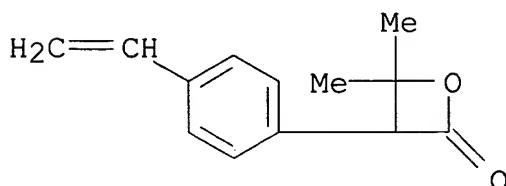
RN 460998-99-6 HCA

CN Benzeneacetic acid, 4-ethenyl-, polymer with 3-(4-ethenylphenyl)-4,4-  
dimethyl-2-oxetanone (9CI) (CA INDEX NAME)

CM 1

CRN 460998-96-3

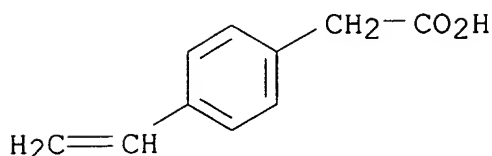
CMF C13 H14 O2



CM 2

CRN 46122-65-0

CMF C10 H10 O2



- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST design synthesis mass persistent **lithog** photoresist;  
lactone polymer mass persistent **lithog** photoresist
- IT Fluoropolymers, preparation  
(**lithog.** evaluation of copolymers of hexafluoroacetonestyrene and  $\beta$ -lactone styrene for photoresists which undergo acid catalyzed polarity switch without release of volatiles)
- IT Polyalkenamers  
(neg. results; **lithog.** evaluation of copolymers of hexafluoroacetonestyrene and  $\beta$ -lactone styrene for photoresists which undergo acid catalyzed polarity switch without release of volatiles)
- IT 460998-97-4P **460998-99-6P** 460999-01-3P  
(**lithog.** evaluation of copolymers of hexafluoroacetonestyrene and  $\beta$ -lactone styrene for photoresists which undergo acid catalyzed polarity switch without release of volatiles)
- IT 460998-86-1  
(neg. results; **lithog.** evaluation of lactone polymer in relation to design of photoresists which undergo acid catalyzed polarity switch without release of volatiles)
- L39 ANSWER 7 OF 18 HCA COPYRIGHT 2006 ACS on STN  
136:46763 Manufacturing composite parts containing insulators and photosensitive compositions for multilayer circuit boards and electronic packages. Hotta, Yasuyuki; Hiraoka, Toshiro; Asakawa, Koji; Mataka, Shigeru (Toshiba Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2001345537 A2 **20011214**, 26 pp. (Japanese).  
CODEN: JKXXAF. APPLICATION: JP 2001-96683 20010329. PRIORITY: JP 2000-159163 20000331.
- AB The process includes: (1) forming photosensitive compn. layers on insulators, (2) exposing the layers to light of  $\geq 280$ -nm wave-length to form ion-exchanging radicals for patterning, and (3) bonding the radicals with metal ions or metals to form elec.

conductive parts. Insulators are not deteriorated by the exposure process, and abnormal pptn. of metals is absent, allowing easy formation of elec. conductive parts with precision patterns.

IT **158259-53-1**

(manufg. composite parts contg. insulators and photosensitive compns. for multilayer circuit boards and electronic packages)

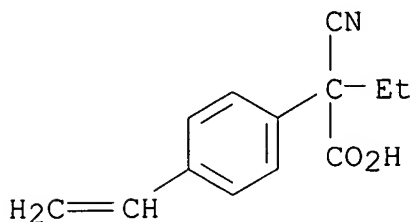
RN 158259-53-1 HCA

CN Benzeneacetic acid,  $\alpha$ -cyano-4-ethenyl- $\alpha$ -ethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 158259-52-0

CMF C13 H13 N O2



IC ICM H05K003-10

ICS C23C018-18; G03F007-004; G03F007-38; H05K001-18; H05K003-18; H05K003-46

CC 76-3 (Electric Phenomena)

IT Electric insulators

Electronic packages

**Photolithography**

Printed circuit boards

(manufg. composite parts contg. insulators and photosensitive compns. for multilayer circuit boards and electronic packages)

IT 13676-54-5, Bis(4-maleimidophenylmethane) **158259-53-1**

380427-67-8 380428-37-5

(manufg. composite parts contg. insulators and photosensitive compns. for multilayer circuit boards and electronic packages)

L39 ANSWER 8 OF 18 HCA COPYRIGHT 2006 ACS on STN

132:144411 Water soluble positive-working photoresist composition.

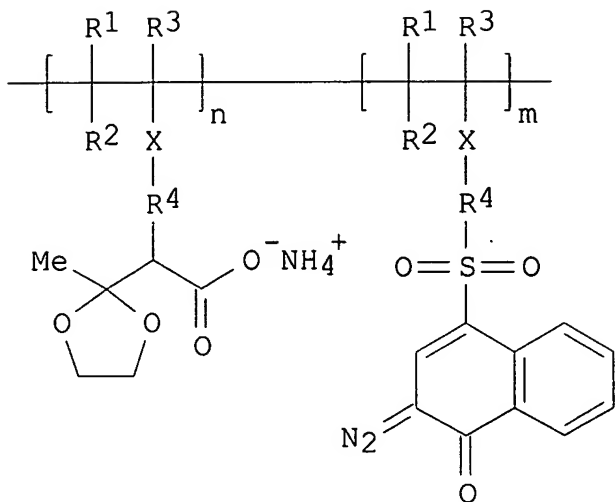
Mcculloch, Iain; East, Anthony J.; Kang, Ming; Keosian, Richard; Yoon, Hyun-nam (Clariant International Ltd., Switz.). PCT Int.

Appl. WO 2000005282 A1 **20000203**, 16 pp. DESIGNATED

STATES: W: CN, JP, KR, SG; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2.

APPLICATION: WO 1999-EP4636 19990703. PRIORITY: US 1998-121285 19980723.

GI



AB Water sol. pos. working photoresist for i-line **lithog.** comprises a polymer I (R1-R4 = H, C1-5 alkyl or alkoxy; X = CO, OCO, CONH, O C1-5 alkyl) with a backbone coupled by linkage groups to two pendant groups. The first pendant group is a  $\beta$ -keto carboxylate moiety designed to undergo a thermal elimination polarity switch to a water-insol. ketone. A second linkage group couples a diazonaphthoquinone (DNQ) moiety via a 4-sulfonate group, to the backbone. This DNQ moiety undergoes a common photochem. rearrangement to a water-sol. indene carboxylic acid. The photoresist film is deposited on a substrate and transformed to a water insol. state by heating. This causes the  $\beta$ -keto carboxylate salt to undergo both Hofmann degradn. and decarboxylation, liberating ammonia and CO<sub>2</sub> and yielding an aliph. ketone. During the exposure fabrication step, the now water insol. photoresist undergoes a common photochem. rearrangement reaction at the DNQ site, which yields an indene carboxylic acid. The polymer product, in the exposed regions, which contains the highly polar carboxylic acid group, is now sol. in aq. base developer. As the starting polymer undergoes two soly. switches, from water sol. to insol. (after heating) and back to sol. (after irradiation), the photoresist will create a pos. image when developed from an aq. base.

IT 256490-88-7P

(water sol. pos. working photoresist for i-line **lithog.** consisting of polymer with  $\beta$ -keto carboxylate pendant group and diazonaphthoquinone pendant group)

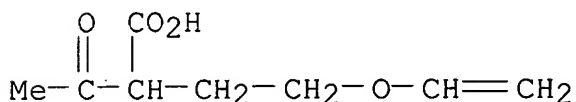
RN 256490-88-7 HCA

CN Butanoic acid, 2-[2-(ethenyloxy)ethyl]-3-oxo-, polymer with  
2-[[[(3-diazo-3,4-dihydro-4-oxo-1-naphthalenyl)sulfonyl]oxy]ethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 256490-87-6

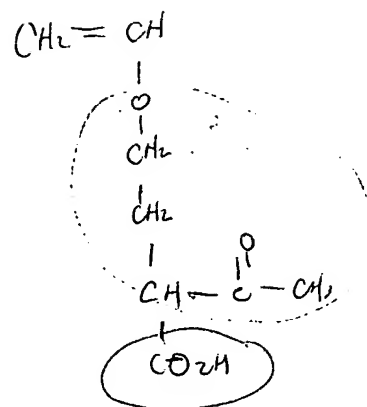
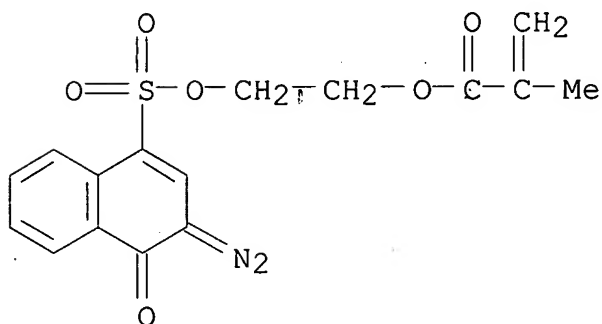
CMF C8 H12 O4



CM 2

CRN 167408-33-5

CMF C16 H14 N2 O6 S



IC ICM C08F246-00

ICS C08F008-48; G03F007-023

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

ST water soluble pos working **lithog** polymer photoresist

IT Elimination reaction

(thermal; water sol. pos. working polymer photoresist for i-line  
**lithog.** with  $\beta$ -keto carboxylate pendant group  
undergoing thermal elimination polarity switch to water-insol.  
ketone during film prepn. process)

IT Positive photoresists

(water sol. pos. working photoresist for i-line **lithog.**  
consisting of polymer with  $\beta$ -keto carboxylate pendant group  
and diazonaphthoquinone pendant group)

IT **256490-88-7P**

(water sol. pos. working photoresist for i-line **lithog.**)

consisting of polymer with  $\beta$ -keto carboxylate pendant group and diazonaphthoquinone pendant group)

- IT 124-38-9, Carbon dioxide, processes 7664-41-7, Ammonia, processes (water sol. pos. working polymer photoresist for i-line lithog. with  $\beta$ -keto carboxylate pendant group undergoing thermal elimination polarity switch to water-insol. ketone during film prepn. process)

L39 ANSWER 9 OF 18 HCA COPYRIGHT 2006 ACS on STN

130:202940 Oil-based ink for making **lithographic**

**printing plate** according to ink-jet printing

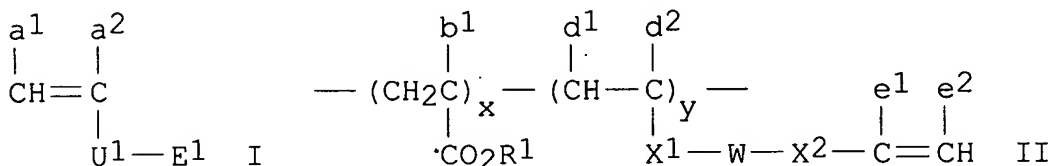
process. Kato, Eiichi (Fuji Photo Film Co., Ltd., Japan). Jpn.

Kokai Tokkyo Koho JP 11043638 A2 **19990216** Heisei, 30 pp.

(Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-147732 19980528.

PRIORITY: JP 1997-154509 19970528.

GI



- AB The oil-based ink consists of resin particles dispersed in a non-aq. carrier having elec. resistance  $\geq 109 \Omega\text{cm}$  and  $\leq 3.5$  dielec. const., wherein the resin particles are prepd. by polymn. of a monofunctionalized monomer(A) which becomes non-sol. in a mixed-non-aq. solvent after polymn., a monomer I ( $a1-2 = \text{H}$ , halo, cyano, alkyl, etc.;  $U1 = -\text{COO}-$ ,  $-\text{CONH}-$ , etc.;  $E1 = \text{C} \geq 8$  aliph.) which copolymerizes with the monomer(A), and copolymer II ( $b1 = \text{H}$ ,  $\text{C}1-4$  alkyl;  $R1 = \text{C}10-32$  alkyl, alkenyl;  $d1-2$  and  $e1-2 = \text{H}$ , halo, cyano, alkyl, etc.;  $X1-2 = -\text{COO}-$ ,  $-\text{CONH}-$ , etc.;  $x/y = 90/10-99/1$ ) which is sol. in the mixed non-aq. solvent. The ink shows excellent characteristics in the redispersion, the shelf-life, and the printing durability.

- IT **220733-92-6P**, Dodecyl methacrylate-octadecyl methacrylate-glycidyl methacrylate copolymer vinylsuccinate ester (dispersion stabilizing resin for prepn. of oil-based ink for making **lithog. printing plate** according to ink-jet printing process)

RN 220733-92-6 HCA

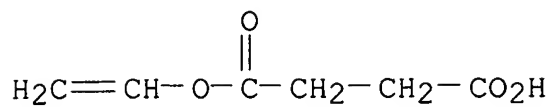
- CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with octadecyl 2-methyl-2-propenoate and oxiranylmethyl 2-methyl-2-propenoate, ethenyl butanedioate (9CI) (CA INDEX NAME)



CM 1

CRN 44912-22-3

CMF C6 H8 O4



CM 2

CRN 120066-95-7

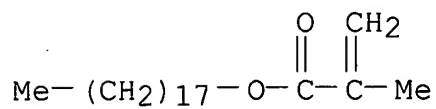
CMF (C22 H42 O2 . C16 H30 O2 . C7 H10 O3) x

CCI PMS

CM 3

CRN 32360-05-7

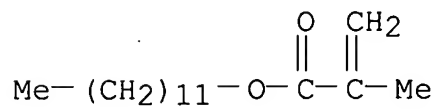
CMF C22 H42 O2



CM 4

CRN 142-90-5

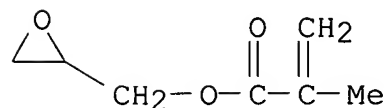
CMF C16 H30 O2



CM 5

CRN 106-91-2

CMF C7 H10 O3



IC ICM C09D011-00  
ICS B41C001-10; B41M001-06; B41M005-00; B41N001-14

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 35, 38, 42

ST Oil based ink **lithog printing plate**;  
resin particle polymn ink jet printing

IT Polymers, preparation  
(graft; oil-based ink for making **lithog.  
printing plate** according to ink-jet printing  
process)

IT Inks  
(jet-printing; oil-based ink for making **lithog.  
printing plate** according to ink-jet printing  
process)

IT Ink-jet printing  
**Lithographic plates**  
(oil-based ink for making **lithog. printing  
plate** according to ink-jet printing process)

IT 220728-45-0P, 11-Methacrylamide undecanoic acid-tridecyl  
methacrylate copolymer ester with vinyl alcohol 220728-51-8P  
220733-91-5P, 2-Hydroxyethyl methacrylate-octadecyl methacrylate  
copolymer allylglutaric acid ester **220733-92-6P**, Dodecyl  
methacrylate-octadecyl methacrylate-glycidyl methacrylate copolymer  
vinylsuccinate ester  
(dispersion stabilizing resin for prepn. of oil-based ink for  
making **lithog. printing plate**  
according to ink-jet printing process)

IT 29406-88-0P, Octadecyl vinyl ether-vinyl acetate copolymer  
39049-73-5P, Ethyl acrylate-methyl methacrylate-octadecyl acrylate  
copolymer 55778-35-3P, Octadecyl methacrylate-vinyl acetate  
copolymer 113989-22-3P 178630-10-9P, Vinyl acetate-vinyl oleate  
copolymer 212839-66-2P, Methyl methacrylate-methyl  
acrylate-octadecyl  $\alpha$ -chloroacrylate copolymer 212839-68-4P,  
Methyl methacrylate-methyl acrylate-tetradecyl  $\alpha$ -cyanoacrylate  
copolymer 212839-71-9P, Ethyl methacrylate-methyl acrylate-dodecyl  
acrylate-mono(hexyl)mono(methacryloyloxyethyl) butenedioate  
copolymer 212839-73-1P, Vinyl acetate-styrene-vinyl  
propionate-butoxycarbonyldecyl methacrylate copolymer  
212839-74-2P, Methyl methacrylate-acrylic acid-methyl  
acrylate-docosanyl acrylate copolymer 216878-38-5P,  
Hexyloxy-carbonyl-ethyl-carbonyloxyethyl methacrylate-vinyl acetate  
copolymer 216878-50-1P 220728-60-9P 220728-65-4P  
220728-67-6P 220728-70-1P 220728-72-3P 220728-75-6P  
220728-78-9P, Methyl methacrylate-2-cyanoethyl methacrylate-methyl  
acrylate-mono(nonyl) mono( $\alpha$ -chloroacryloyloxyethyl) glutarate  
copolymer

(resin particles for oil-based ink for making **lithog.**  
**printing plate** according to ink-jet printing  
process)

L39 ANSWER 10 OF 18 HCA COPYRIGHT 2006 ACS on STN

130:73904 Photosensitive composition, image-forming material, and image formation. Hirai, Katsura; Nagashima, Toshiharu; Miura, Akio; Ohnishi, Akira (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 10319590 A2 **19981204** Heisei, 27 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-128574 19970519.

AB The title compn. contains a compd. R1CR2R3CO2H (R1-3 = substituents  $\geq 1$  of which is an arom. ring group which may be substituted, vinyl, amino or OH) and an IR absorbent. An image-forming material possessing a photosensitive layer contg. the compn. on a support and an imaging method by IR irradiating IR the material followed by development are also claimed. The compn. shows high sensitivity toward IR rays and developability and is useful for neg.-working presensitized **lithog.** plates.

IT **218140-65-9**, N-(4-Hydroxyphenyl)methacrylamide-methyl methacrylate-(p-vinylphenyl)acetic acid copolymer (photosensitive compn. contg. carboxylic acid compd. and IR absorbent)

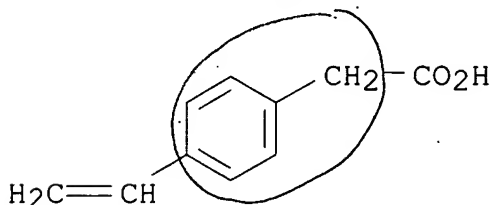
RN 218140-65-9 HCA

CN Benzeneacetic acid, 4-ethenyl-, polymer with N-(4-hydroxyphenyl)-2-methyl-2-propenamamide and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 46122-65-0

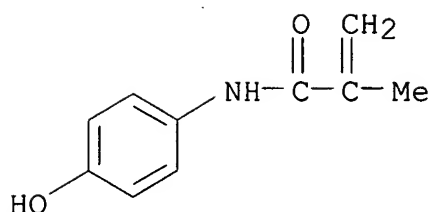
CMF C10 H10 O2



CM 2

CRN 19243-95-9

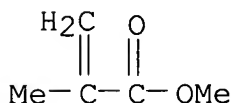
CMF C10 H11 N O2



CM 3

CRN 80-62-6

CMF C5 H8 O2



IC ICM G03F007-038  
ICS G03F007-00; G03F007-004  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST photosensitive compn carboxylic acid compd; IR absorbent presensitized **lithog** plate  
IT **Lithographic** plates  
(presensitized; photosensitive compn. contg. carboxylic acid compd. and IR absorbent)  
IT 60-18-4, L-Tyrosine, uses 86-87-3, 1-Naphthaleneacetic acid  
90-64-2,  $\alpha$ -Hydroxyphenylacetic acid 117-34-0, Diphenylacetic acid 492-37-5, Hydratropic acid 552-63-6, Tropic acid 2835-06-5,  $\alpha$ -Aminophenylacetic acid 218140-63-7  
**218140-65-9**, N-(4-Hydroxyphenyl)methacrylamide-methyl methacrylate-(p-vinylphenyl)acetic acid copolymer 218140-67-1  
218140-69-3 218151-82-7  
(photosensitive compn. contg. carboxylic acid compd. and IR absorbent)

L39 ANSWER 11 OF 18 HCA COPYRIGHT 2006 ACS on STN  
127:339149 Photogenerated Base in Resist and Imaging Materials: Design of Functional Polymers Susceptible To Base Catalyzed Decarboxylation. Frechet, Jean M. J.; Leung, Man-Kit; Urankar, Edward J.; Willson, C. Grant; Cameron, James F.; MacDonald, Scott A.; Niesert, Claus P. (Department of Chemistry, University of California, Berkeley, CA, 94720-1460, USA). Chemistry of Materials, 9(12), 2887-2893 (English) **1997**. CODEN: CMATEX. ISSN: 0897-4756. Publisher: American Chemical Society.

AB A chem. amplified resist material consisting of poly[2-cyano-2-(p-vinylphenyl) butanoic acid] and bis[[2-nitrobenzyl)oxy]carbonyl]hexane-1,6-diamine has been designed and tested in neg. and pos. tone imaging. The resist operates on the principle of base-catalyzed decarboxylation. Amine generated by exposure to UV radiation catalyzes the thermal loss of carbon dioxide from the polymer side chain thereby changing the soly. of the resist film in aq. base developer. Image reversal is accomplished by in situ silylation of the exposed and thermolyzed film followed by dry development using an oxygen plasma. The resist shows high sensitivity to deep UV irradian., ca. 10 mJ/cm<sup>2</sup>, while image contrast is excellent.

IT **158259-53-1P**, Poly[2-cyano-2-(p-vinylphenyl) butanoic acid]  
(**lithog.** chem. amplified resist material based on  
base-catalyzed decarboxylation contg.)

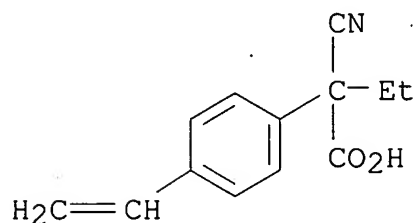
RN 158259-53-1 HCA

CN Benzeneacetic acid,  $\alpha$ -cyano-4-ethenyl- $\alpha$ -ethyl-,  
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 158259-52-0

CMF C13 H13 N O2



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **lithog** photoresist chem amplified cyanovinylphenylbutanoic acid; base catalyzed decarboxylation **lithog** polymer photoresist

IT Photoresists  
(chem. amplified; **lithog.** resist material based on  
base-catalyzed decarboxylation contg. poly[2-cyano-2-(p-vinylphenyl) butanoic acid] and bis[[2-nitrobenzyl)oxy]carbonyl]hexane-1,6-diamine)

IT Silylation  
(for image reversal in **lithog.** chem. amplified  
photoresist material based on base-catalyzed decarboxylation  
contg. poly[2-cyano-2-(p-vinylphenyl) butanoic acid] and)

IT Decarboxylation

- (photochem.; **lithog.** chem. amplified photoresist material based on base-catalyzed decarboxylation contg. poly[2-cyano-2-(p-vinylphenyl) butanoic acid] and)
- IT **158259-53-1P**, Poly[2-cyano-2-(p-vinylphenyl) butanoic acid] (**lithog.** chem. amplified resist material based on base-catalyzed decarboxylation contg.)
- IT 124-38-9, Carbon dioxide, formation (nonpreparative) (**lithog.** chem. amplified resist material based on base-catalyzed decarboxylation contg. poly[2-cyano-2-(p-vinylphenyl) butanoic acid] and)
- L39 ANSWER 12 OF 18 HCA COPYRIGHT 2006 ACS on STN  
126:257070 Electrophotographic manufacture of **printing plates** with improved transfer layer transfer properties and oil desensitization treatment and giving high-precision high-quality images. Kato, Eiichi (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 09054463 A2 **19970225** Heisei, 55 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-224530 19950810.
- AB The title process involves formation of a electrophotog. toner image on electrophotog. photoreceptor having a release property, transfer of the toner image to first receptor, transfer of the toner image together with the transfer layer on the first receptor to a substrate that becomes **lithog.** printable hydrophilic surface in printing together with the transfer layer, then removing the transfer layer on the substrate by chem. treatment, wherein the transfer is made via any one of the following three methods: (i) on the entire electrophotog. photoreceptor surface with a toner image are formed first transfer layer (T1) and second transfer layer (T2), then the transfer layer and toner image are transferred on the first receptor; (ii) T2 and T1 are formed on the first receptor, then the toner image is transferred; (iii) after formation of T1 on the entire electrophotog. photoreceptor surface with a toner image and T2 on the first receptor, the toner image and T1 are transferred onto the T2 on the first receptor. T1 and T2 are formed by electrodeposition method of particles contg. mainly thermoplastic resins removable by chem. treatment, the T1 in contact with the photoreceptor is formed from particle contg. mainly thermoplastic particles contg. (A) resins having Tg 20-100° or softening point 38-120° and (B) resins having Tg ≤45° or softening point ≤60° (the component A has ≥2° higher softening point or Tg than the component B), and the T2 in contact with the first receptor is formed from particles contg. mainly resins with Tg 10-35° or softening point 30-50°.
- IT **188601-29-8P**  
(electrophotog. manuf. of **printing plates** with improved transfer layer transfer properties and oil desensitization treatment and giving high-precision high-quality

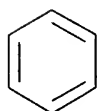
images)  
RN 188601-29-8 HCA  
CN Benzoic acid, 4-ethenyl-, polymer with ethenylmethylbenzene (9CI)  
(CA INDEX NAME)

CM 1

CRN 25013-15-4

CMF C9 H10

CCI IDS



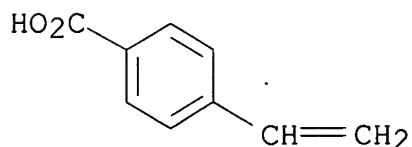
D1-Me

D1-CH=CH<sub>2</sub>

CM 2

CRN 1075-49-6

CMF C9 H8 O2



IC ICM G03G013-26  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
ST electrophotog **printing plate** manuf  
IT Electrophotography  
**Printing plates**  
(electrophotog. manuf. of **printing plates**  
with improved transfer layer transfer properties and oil  
desensitization treatment and giving high-precision high-quality  
images)  
IT 9010-88-2P, Ethyl acrylate-methyl methacrylate copolymer

25135-39-1P, Acrylic acid-ethyl acrylate-methyl methacrylate copolymer 25322-25-2P, Acrylic acid-methyl methacrylate copolymer 27155-22-2P, Acrylic acid-methyl acrylate-methyl methacrylate copolymer 67923-67-5P, Acrylic acid-ethyl acrylate-methyl acrylate-methyl methacrylate copolymer 72058-59-4P 152222-84-9P 157859-73-9P 176762-50-8P, Crotonic acid-vinyl acetate-vinyl valerate copolymer 188601-19-6P 188601-20-9P 188601-21-0P 188601-23-2P 188601-24-3P 188601-25-4P 188601-27-6P 188601-28-7P **188601-29-8P** 188604-81-1P

(electrophotog. manuf. of **printing plates** with improved transfer layer transfer properties and oil desensitization treatment and giving high-precision high-quality images)

L39 ANSWER 13 OF 18 HCA COPYRIGHT 2006 ACS on STN

125:342992 Imaging recording material for direct **printing plate**. Kondo, Shunichi (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 08220752 A2 **19960830** Heisei, 30 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-29774 19950217.

AB The material comprises a radiation-absorbing substance, an acid precursor, a compd. having  $\geq 2$  enol ether group  $R_1C(R_2):C(R_3)O-$  ( $R_1, R_2, R_3 = H, \text{alkyl, aryl}; \geq 2$  Rs may form satd. or unsatd. olefinic ring.), and an alkali-sol. resin. The material is useful for offset printing master. The material is suitable for near IR or IR recording without wavelength dependency.

IT **183586-82-5D**, cyclic acetal deriv. with butyraldehyde (photoimaging recording material for direct **printing plate**)

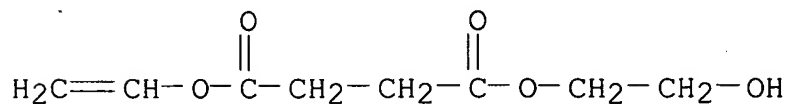
RN 183586-82-5 HCA

CN Butanedioic acid, ethenyl 2-hydroxyethyl ester, polymer with ethenol and ethenyl hydrogen butanedioate (9CI) (CA INDEX NAME)

CM 1

CRN 183586-81-4

CMF C8 H12 O5



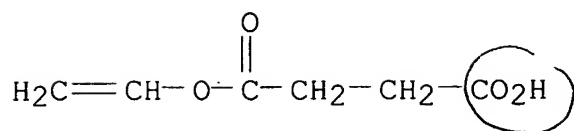
CM 2

CRN 44912-22-3

CMF C6 H8 O4

2 Layer?

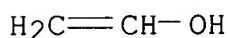




CM 3

CRN 557-75-5

CMF C2 H4 O



IC ICM G03F007-027

ICS B41C001-05; G03F007-004; G03F007-028

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37

ST printing master photoimaging material; **lithog** plate direct photoimaging material; enol ether compd photoimaging compn

IT Photoimaging compositions and processes

(photoimaging recording material for direct **printing plate**)IT **Lithographic plates**(printing master; photoimaging recording material for direct **printing plate**)

IT Vinyl acetal polymers

(butyrals, polymer derivs.; photoimaging recording material for direct **printing plate**)

IT 3712-60-5 52411-04-8 72015-22-6 146793-37-5 150610-14-3

150610-23-4 183586-85-8 183586-89-2

(photoimaging recording material for direct **printing plate**)

IT 25086-15-1, Methacrylic acid-methyl methacrylate copolymer

**183586-82-5D**, cyclic acetal deriv. with butyraldehyde(photoimaging recording material for direct **printing plate**)

L39 ANSWER 14 OF 18 HCA COPYRIGHT 2006 ACS on STN

125:261248 Photoresist composition with photosensitive base generator.

Cameron, James F.; Frechet, Jean M. J.; Leung, Man-kit; Niesert, Claus-peter; Macdonald, Scott A.; Willson, Carlton G. (International Business Machines Corporation, USA). U.S. US 5545509 A

**19960813**, 9 pp., Cont.-in-part of U.S. Ser. No.

981,033, abandoned. (English). CODEN: USXXAM. APPLICATION: US

1994-190716 19940201. PRIORITY: US 1992-981033 19921124.

AB The present invention relates to an improved **lithog.** photoresist compn. comprising a photosensitive base generator. The compn. is useful in the manuf. of integrated circuits.

IT **158259-53-1P**

(prepn. and use in prepg. photoresists)

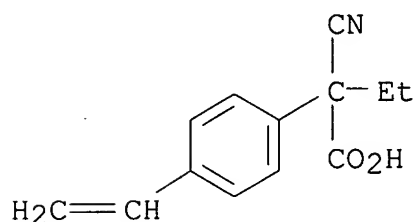
RN 158259-53-1 HCA

CN Benzeneacetic acid,  $\alpha$ -cyano-4-ethenyl- $\alpha$ -ethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 158259-52-0

CMF C13 H13 N O2



IC ICM G03C001-492

INCL 430270100

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **158259-53-1P** 158259-56-4P, Poly[tert-butyl 2-cyano-2-(p-vinylphenyl)butyrate]

(prepn. and use in prepg. photoresists)

L39 ANSWER 15 OF 18 HCA COPYRIGHT 2006 ACS on STN

121:217673 Photoresist composition. Cameron, James Field; Frechet, Jean M. J.; Leung, Man Kit; Niesert, Claus-peter; MacDonald, Scott Arthur; Willson, Carlton Grant (International Business Machines Corp., USA). Eur. Pat. Appl. EP 599571 A2 **19940601**, 11 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1993-309273 19931122. PRIORITY: US 1992-981033 19921124.

AB Provided is an improved **lithog.** photoresist compn. comprising a photosensitive base generator, a polymer, and a base labile compd. The compn. is useful in the manuf. of integrated circuits.

IT **158259-53-1P**

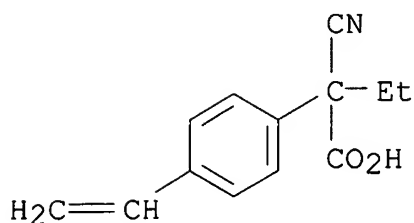
(prepn. and use of, photoresist compn. using)

RN 158259-53-1 HCA

CN Benzeneacetic acid,  $\alpha$ -cyano-4-ethenyl- $\alpha$ -ethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 158259-52-0  
 CMF C13 H13 N O2



- IC ICM G03F007-038  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST photoresist compn base generator **lithog**  
 IT **Lithography**  
 (photoresist compn. for)  
 IT Resists  
 (photo-, compn., for **lithog**. and manuf. of integrated circuit)  
 IT **158259-53-1P**  
 (prepn. and use of, photoresist compn. using)
- L39 ANSWER 16 OF 18 HCA COPYRIGHT 2006 ACS on STN  
 121:191363 Electrophotographic manufacture of **lithographic** plate. Kato, Eiichi; Ohsawa, Sadao; Kasai, Seishi (Fuji Photo Film Co., Ltd., Japan). PCT Int. Appl. WO 9316418 A1 **19930819**, 259 pp. DESIGNATED STATES: W: DE, JP, US. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1993-JP179 19930212. PRIORITY: JP 1992-57269 19920212; JP 1992-116794 19920410; JP 1992-161650 19920529; JP 1992-169880 19920605; JP 1992-194712 19920630; JP 1992-201811 19920707.
- AB The title manuf. comprises the steps of forming an electrophotog. toner image on a strippable transfer layer based on a chem. removable thermoplastic resin (e.g., by dissoln. with an aq. alkali soln.) and formed on the releasable surface of an electrophotog. photoreceptor, thermally transfer the toner image along with the transfer layer to a receptor whose surface is capable of becoming hydrophilic for **lithog**. printing, and chem. removing the thermoplastic resin (desensitization of a **lithog**. plate) of the transfer layer on the receptor (removing the thermoplastic resin of the transfer layer at the nonimage area to expose the hydrophilic surface of the receptor support such as an Al support and save the thermoplastic resin of the transfer layer at the toner

image area as a printing image of a **lithog.** plate). The invention, also suited for laser scanning exposure, provides durable and stable **lithog.** plates which produce good quality images.

IT 157859-80-8 157860-48-5

(electrophotog. photoreceptor having strippable transfer layer of)

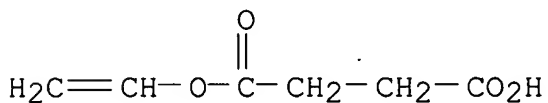
RN 157859-80-8 HCA

CN Butanedioic acid, monoethenyl ester, polymer with ethenyl acetate and ethoxyethene (9CI) (CA INDEX NAME)

CM 1

CRN 44912-22-3

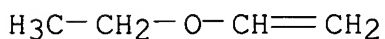
CMF C6 H8 O4



CM 2

CRN 109-92-2

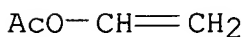
CMF C4 H8 O



CM 3

CRN 108-05-4

CMF C4 H6 O2



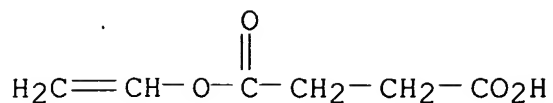
RN 157860-48-5 HCA

CN Butanedioic acid, monoethenyl ester, polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 44912-22-3

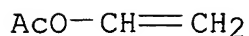
CMF C6 H8 O4



CM 2

CRN 108-05-4

CMF C4 H6 O2



IT 157859-16-0P 157859-19-3P

(latex, prepn. and use of, as thermoplastic resin grains for  
strippable transfer layer)

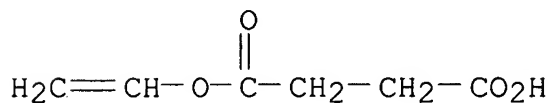
RN 157859-16-0 HCA

CN Butanedioic acid, monoethenyl ester, polymer with diethenylbenzene,  
dodecyl 2-methyl-2-propenoate and ethenyl acetate, graft (9CI) (CA  
INDEX NAME)

CM 1

CRN 44912-22-3

CMF C6 H8 O4

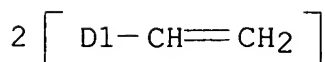
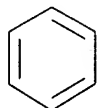


CM 2

CRN 1321-74-0

CMF C10 H10

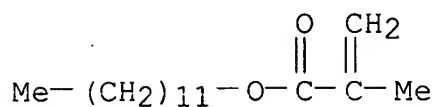
CCI IDS



CM 3

CRN 142-90-5

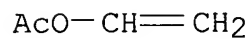
CMF C16 H30 O2



CM 4

CRN 108-05-4

CMF C4 H6 O2



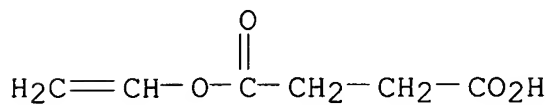
RN 157859-19-3 HCA

CN Butanedioic acid, monoethenyl ester, polymer with diethenylbenzene, dodecyl 2-methyl-2-propenoate, ethenyl acetate and ethenyl propanoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 44912-22-3

CMF C6 H8 O4

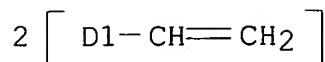
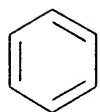


CM 2

CRN 1321-74-0

CMF C10 H10

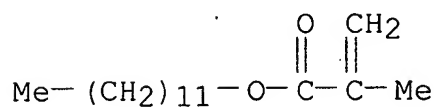
CCI IDS



CM 3

CRN 142-90-5

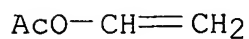
CMF C16 H30 O2



CM 4

CRN 108-05-4

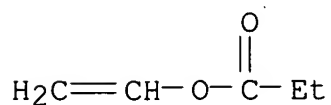
CMF C4 H6 O2



CM 5

CRN 105-38-4

CMF C5 H8 O2



IC ICM G03G013-26

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **lithog** plate electrophotog manuf; electrophotog transfer layer **lithog** plate; photoreceptor electrophotog thermal transfer layer

IT **Lithographic** plates  
 (electrophotog. manuf. of, using releasable photoreceptor and  
 strippable transfer layer)

IT 25086-15-1, Methacrylic acid-methyl methacrylate copolymer  
 25133-97-5, Ethyl acrylate-methacrylic acid-methyl methacrylate  
 copolymer 40045-03-2, Ethyl methacrylate-glycidyl  
 methacrylate-2-hydroxyethyl methacrylate copolymer 155247-40-8  
 155247-42-0 157859-84-2 157859-86-4 157859-87-5 157859-88-6  
 157859-90-0 157859-91-1  
 (binders, electrophotog. photosensitive layer contg., for  
**lithog.** plate)

IT 57-55-6, 1,2-Propanediol, uses 85-44-9, 1,3-Isobenzofurandione  
 111-33-1 526-95-4, Gluconic acid 926-63-6, N,  
 N-Dimethylpropylamine 2224-15-9, Ethylenediglycidyl ether  
 2550-02-9, Propyltriethoxysilane 27431-62-5 42055-15-2,  
 3-(N-Methylamino)propanol  
 (crosslinking agent, electrophotog. photosensitive layer contg.,  
 for **lithog.** plate)

IT 25189-12-2 26338-06-7, Ethyl acrylate-methacrylic acid-methyl  
 acrylate copolymer 26589-39-9, Methacrylic acid-methyl acrylate  
 copolymer 26936-24-3 27155-22-2 32517-13-8 59213-43-3  
 65697-21-4 79042-18-5 129636-54-0 140143-08-4 157859-72-8  
 157859-73-9 157859-74-0 157859-75-1 157859-76-2 157859-77-3  
 157859-78-4 157859-79-5 **157859-80-8** 157859-81-9  
 157859-82-0 157859-92-2 157859-93-3 157859-94-4 157859-95-5  
 157859-96-6 157859-98-8 157859-99-9 157860-01-0 157860-02-1  
 157860-04-3 157860-05-4 157860-06-5 157860-08-7 157860-10-1  
 157860-11-2 157860-12-3 157860-14-5 157860-16-7 157860-18-9  
 157860-23-6 157860-24-7 157860-25-8 157860-26-9 157860-28-1  
 157860-30-5 157860-32-7 157860-34-9 157860-36-1 157860-37-2  
 157860-39-4 157860-40-7 157860-41-8 157860-42-9 157860-43-0  
 157860-44-1 157860-45-2 157860-46-3 157860-47-4  
**157860-48-5** 157860-49-6 157860-51-0 157860-52-1  
 157860-53-2 157860-54-3 157860-56-5 157860-58-7 157860-60-1  
 157860-63-4 157860-65-6 157860-67-8 157960-12-8  
 (electrophotog. photoreceptor having strippable transfer layer  
 of)

IT 157859-02-4P 157859-03-5P 157859-04-6P 157859-05-7P  
 157859-06-8P 157859-07-9P 157859-08-0P 157859-09-1P  
 157859-10-4P 157859-11-5P 157859-13-7P 157859-14-8P  
 157859-15-9P **157859-16-0P** 157859-17-1P 157859-18-2P  
**157859-19-3P** 157859-21-7P 157859-23-9P 157859-25-1P  
 157859-27-3P 157859-28-4P 157859-29-5P 157859-30-8P  
 157859-32-0P 157859-34-2P 157859-36-4P 157859-38-6P  
 157859-39-7P 157859-41-1P 157859-43-3P 157859-45-5P  
 157859-46-6P 157859-48-8P 157859-50-2P 157859-52-4P  
 157859-55-7P 157859-57-9P 157859-59-1P 157859-61-5P  
 157859-62-6P 157859-64-8P 157859-67-1P 157859-69-3P



157859-71-7P

(latex, prepn. and use of, as thermoplastic resin grains for strippable transfer layer)

IT 79-41-4DP, 2-perfluoroalkylethyl ester, copolymers with 2-hydroxyethyl methacrylate, Et methacrylate, and glycidyl methacrylate 123109-43-3P 144541-84-4P 150624-67-2P 150624-77-4P 150625-01-7P 150625-03-9P 150625-19-7P 150625-22-2P 150642-22-1P 150642-24-3P 155292-83-4P 155292-84-5P 155292-85-6P 155292-86-7P 155292-87-8P 155292-88-9P 155292-90-3P 155292-92-5P 155292-93-6P 155292-94-7P 155292-96-9P 155292-98-1P 155293-26-8P 157966-19-3P

(prepn. and use of, as releasable component for electrophotog. photoreceptor, for **lithog.** plate)

IT 97-63-2DP, Ethyl methacrylate, block copolymers with glycidyl methacrylate and 2-perfluoroalkylethyl methacrylate 106-91-2DP, block copolymers with Et methacrylate and 2-perfluoroalkylethyl methacrylate 868-77-9DP, graft copolymers with 2-perfluoroalkylethyl methacrylate (prepn. and use of, for releasable electrophotog. photoreceptor surface, for **lithog.** plate)

IT 150624-89-8 (star-block, as releasable component for electrophotog. photoreceptor, for **lithog.** plate)

L39 ANSWER 17 OF 18 HCA COPYRIGHT 2006 ACS on STN

120:177970 Resist materials design: base-catalyzed chemical amplification. Wilson, C. G.; Cameron, J. F.; MacDonald, S. A.; Niesert, C. P. (Almaden Res. Cent., IBM, San Jose, CA, 95151, USA). Proceedings of SPIE-The International Society for Optical Engineering, 1925(Advances in Resist Technology and Processing X), 354-65 (English) **1993**. CODEN: PSISDG. ISSN: 0277-786X.

AB The authors describe the initial results on base catalyzed chem. amplified deep-UV photoresists. Photogenerated amines were used as catalysts for the decarboxylation of carboxylic acids. Two approaches to building resists around this chem. were investigated. Decarboxylation of a low mol. wt. carboxylic acid led to base induced dissoln. inhibition of a phenolic polymer giving neg. tone images. A carboxylic acid polymer was synthesized which also is susceptible towards base catalyzed decarboxylation. Wet development of this resist material gives neg. tone images. Site specific gas-phase silylation of the carboxylic acid allows the use of this material in a pos. tone dry develop process. A 0.5  $\mu$ m line-space pattern obtained by this dry develop process illustrates the potential of base-catalyzed chem. amplification.

IT **153463-81-1**

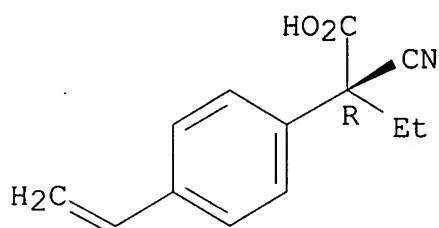
(**lithog.** base catalyzed chem. amplified deep-UV photoresist contg., photogeneration of amine catalyst in)

RN 153463-81-1 HCA  
 CN Benzeneacetic acid,  $\alpha$ -cyano-4-ethenyl- $\alpha$ -ethyl-, (R)-,  
 homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 153463-80-0  
 CMF C13 H13 N O2

Absolute stereochemistry.



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)

ST base catalyzed chem amplification **lithog** resist; amine  
 catalyst photogeneration chem amplification photoresist

IT Resists  
 (photo-, chem. amplification, for deep-UV **lithog.**,  
 based on photogeneration of amine catalyst for decarboxylation)

IT 153463-82-2  
 (**lithog.** base catalyzed chem. amplified deep-UV  
 photoresist contg., photogeneration of amine catalyst from)

IT 24979-70-2, Poly(p-hydroxystyrene) 153463-79-7 **153463-81-1**  
 (**lithog.** base catalyzed chem. amplified deep-UV  
 photoresist contg., photogeneration of amine catalyst in)

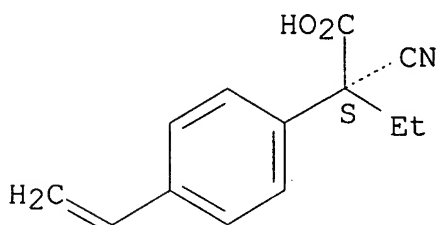
L39 ANSWER 18 OF 18 HCA COPYRIGHT 2006 ACS on STN  
 120:120512 Photogenerated base and chemical amplification: a new resist  
 based on catalyzed decarboxylation. Leung, Man Kit; Frechet, Jean  
 M. J.; Cameron, James F.; Willson, C. Grant (Dep. Chem., Cornell  
 Univ., Ithaca, NY, 14853-1301, USA). Polymeric Materials Science  
 and Engineering, 68, 30-1 (English) **1993**. CODEN: PMSE DG.  
 ISSN: 0743-0515.

AB A design and synthesis are described of poly[2-cyano-2-(p-  
 vinylphenyl)-butanoic acid] (I) for chem. amplified  
**photolithog.** through base catalyzed decarboxylation.  
 Properties and thermal stability of I are studied. Contrast curves  
 for a resist contg. I 90 and an amine photogenerator 10% were  
 obtained under different processing conditions. With post-baking at  
 135° for 5 min, and dil. AZ312MIF developer sensitivity of

1.4 mJ/cm-2 and contrast of 13.7 were obtained.

IT **152588-39-1P**  
 (lithog. chem. amplification photoresist based on  
 catalyzed decarboxylation of, synthesis and properties of)  
 RN 152588-39-1 HCA  
 CN Benzeneacetic acid,  $\alpha$ -cyano-4-ethenyl- $\alpha$ -ethyl-, (S)-,  
 homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 152588-38-0  
 CMF C13 H13 N O2

Absolute stereochemistry.



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 ST lithog photoresist polycyanovinylphenylbutanoic acid  
 IT **152588-39-1P**  
 (lithog. chem. amplification photoresist based on  
 catalyzed decarboxylation of, synthesis and properties of)  
 IT 75-59-2, Tetramethylammonium hydroxide 102-71-6, Triethanolamine,  
 uses 152986-64-6, AZ 312MIF  
 (lithog. developer, sensitivity of chem. amplification  
 photoresist based on poly[cyano(vinylphenyl)butanoic acid] by  
 processing with)  
 IT 152588-40-4P  
 (prepn. and polymn. of, in synthesis of  
 poly[cyano(vinylphenyl)butanoic acid] lithog.  
 photoresist)  
 IT 152588-41-5P  
 (prepn. and reaction of, in synthesis of  
 poly[cyano(vinylphenyl)butanoic acid] lithog.  
 photoresist)  
 IT 1592-20-7  
 (reaction of, with cyanide, in synthesis of  
 poly[cyano(vinylphenyl)butanoic acid] lithog.  
 photoresist)  
 IT 1592-11-6

(reaction of, with ethylbromide, in synthesis of  
poly[cyano(vinylphenyl)butanoic acid] **lithog.**  
photoresist)

=> D L40 1-10 CBIB ABS HITSTR HITIND

L40 ANSWER 1 OF 10 HCA COPYRIGHT 2006 ACS on STN  
140:329560 Method of plate-making positive-working **lithographic  
printing plate**. Aogo, Toshiaki; Onishi, Hiroaki  
(Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP  
2004109442 A2 20040408, 30 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 2002-271435 20020918.

AB The pos.-working **lithog. printing master  
plate** contains an IR absorbing dye and a water-insol. and  
alkali-sol. resin in a **heat-sensitive** layer on a  
water-insol. resin- and alkali-sol. resin-based subbing layer formed  
on the hydrophilic surface of support, in which the soly. of the  
**heat sensitive** layer in an alkali aq. soln.  
increases upon receiving an IR irradiation. The pos.-working  
**lithog. printing master plate** receives  
an IR imagewise exposure, and is developed using an alkali developer  
which contains  $\geq 1$  water-sol. polymer compd. having sulfonic  
acid group, carboxylic acid group, phosphonic acid group, and /or  
salt thereof, a buffer compd., and a base compd.

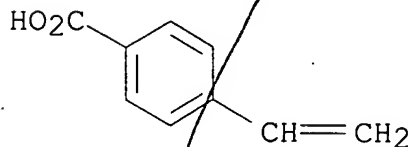
IT **28391-39-1**  
(developer for plate-making of pos.-working **lithog.  
printing plate**)

RN 28391-39-1 HCA  
CN Benzoic acid, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1075-49-6

CMF C9 H8 O2



IC ICM G03F007-32  
ICS G03F007-00; G03F007-004  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38

- ST plate making pos working **lithog** printing developer polymer compd
- IT Phenolic resins, uses  
(novolak; plate-making of pos.-working **lithog**.  
**printing plate** from)
- IT 25087-26-7, Methacrylic acid homopolymer 25300-64-5, Maleic acid-styrene copolymer 27754-99-0 **28391-39-1**  
54640-82-3 83328-59-0  
(developer for plate-making of pos.-working **lithog**.  
**printing plate**)
- IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 134127-48-3  
(plate-making of pos.-working **lithog**. **printing plate** from)

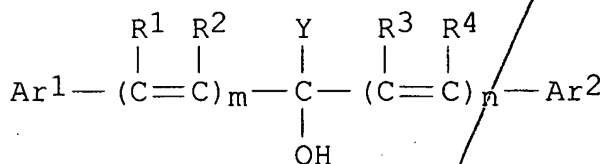
L40 ANSWER 2 OF 10 HCA COPYRIGHT 2006 ACS on STN

140:294816 **Infrared sensitive** composition and

**lithographic printing plate** precursor.

Endo, Akihiro (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl.  
EP 1403039 A1 20040331, 26 pp. DESIGNATED STATES: R: AT, BE, CH,  
DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV,  
FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK. (English). CODEN:  
EPXXDW. APPLICATION: EP 2003-20590 20030918. PRIORITY: JP  
2002-285697 20020930.

GI



I

- AB An **IR sensitive** compn. and a **lithog**.  
**printing plate** precursor having a large difference  
in alkali soly. between the exposed portions and unexposed portions  
(dissoln. discrimination), an excellent latitude in development, and  
a high sensitivity can be provided when the compn. is used for the  
image-forming layer of a **lithog**. **printing plate** precursor, which is an **IR sensitive**  
compn. comprising an alkali-sol. resin having a phenolic hydroxyl  
group (A), a light-heat converting substance (B) and a leucohydroxy  
dye (C). The leucohydroxy dye is represented by the general formula  
I (Ar<sup>1</sup>, Ar<sup>2</sup> = aryl, heteroaryl; R<sup>1</sup>-R<sup>4</sup> = H, alkyl; Y = H, alkyl,  
aryl, heteroaryl; at least one of Ar<sup>1</sup>, Ar<sup>2</sup> and Y has as a  
substituent a hydroxy group, an amino group, a monoalkylamino group

or a dialkylamino group at the ortho or para position; two of Ar1, Ar2 and Y may link together to form a ring; m, n = 0 or 1).

IT 220227-02-1

(IR sensitive compn. and lithog.  
printing plate precursor)

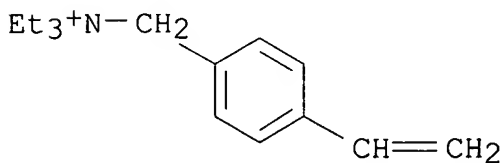
RN 220227-02-1 HCA

CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer  
with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 14350-43-7

CMF C15 H24 N . Cl

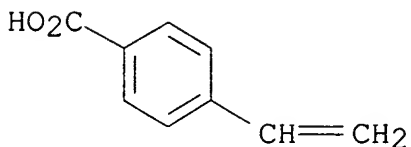


● Cl<sup>-</sup>

CM 2

CRN 1075-49-6

CMF C9 H8 O2



IC ICM B41C001-10

ICS G03F007-004; G03C001-73

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)

ST lithog printing plate precursor

IR sensitive compn

IT Lithographic plates

(IR sensitive compn. and lithog.  
printing plate precursor)

IT 467-63-0 510-13-4 603-48-5 6948-88-5 23705-78-4

103250-84-6, m-Cresol-p-cresol-phenol copolymer **220227-02-1**  
676259-57-7

(**IR sensitive** compn. and **lithog.**  
**printing-plate precursor**)

L40 ANSWER 3 OF 10 HCA COPYRIGHT 2006 ACS on STN

139:188366 Positive-working **heat sensitive**

**lithography printing plate** with high  
development latitude. Watanabe, Noriaki (Fuji Photo Film Co., Ltd.,  
Japan). Jpn. Kokai Tokkyo Koho JP 2003241388 A2 20030827, 26 pp.  
(Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-43565 20020220.

AB Title **printing plate** is obtained by laminating  
an aluminum substrate, which has been subjected to anode oxidative  
treatment, an undercoat comprising polymer having acid group-contg.  
components and onium group-contg. components, a middle layer  
comprising a resin which is water-insol. but sol. in alkali, and a  
**heat-sensitive** layer which comprises a  
water-insol. but alkali-sol. resin and an IR-absorbing dye and  
becomes more sol. in aq. alkali upon heating.

IT **220227-02-1 252721-97-4 252721-98-5**  
(undercoat; pos.-working **heat sensitive**  
**lithog. printing plate** with high  
development latitude)

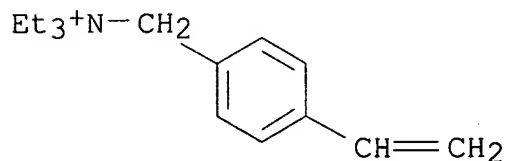
RN 220227-02-1 HCA

CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer  
with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 14350-43-7

CMF C15 H24 N . Cl

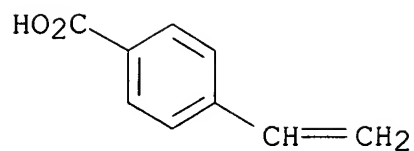


● Cl<sup>-</sup>

CM 2

CRN 1075-49-6

CMF C9 H8 O2



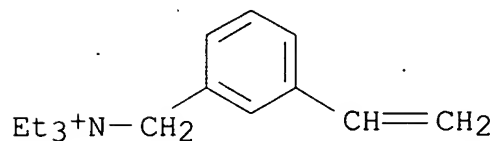
RN 252721-97-4 HCA

CN Benzenemethanaminium, 3-ethenyl-N,N,N-triethyl-, chloride, polymer  
with 4-ethenylbenzoic acid and 4-ethenyl-N,N,N-  
triethylbenzenemethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 91277-26-8

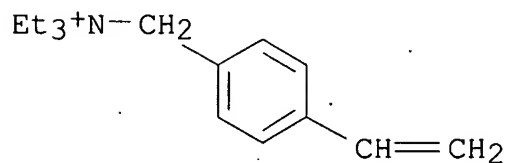
CMF C15 H24 N . Cl

● Cl<sup>-</sup>

CM 2

CRN 14350-43-7

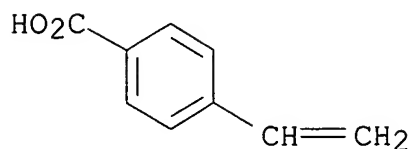
CMF C15 H24 N . Cl

● Cl<sup>-</sup>

CM 3



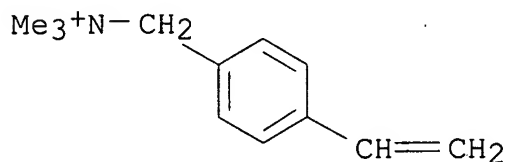
CRN 1075-49-6  
CMF C9 H8 O2



RN 252721-98-5 HCA  
CN Benzenemethanaminium, 4-ethenyl-N,N,N-trimethyl-, chloride, polymer  
with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

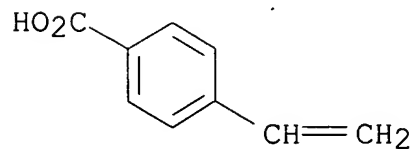
CRN 7538-38-7  
CMF C12 H18 N . Cl



● Cl<sup>-</sup>

CM 2

CRN 1075-49-6  
CMF C9 H8 O2



IC ICM G03F007-11  
ICS B41N001-14; G03F007-00; G03F007-004; G03F007-039  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes).

- ST pos working **heat sensitive lithog printing plate**
- IT Phenolic resins, uses  
(novolak, middle layer and **heat-sensitive layer**; pos.-working **heat sensitive lithog. printing plate** with high development latitude)
- IT **Lithographic plates**  
(planog.; pos.-working **heat sensitive lithog. printing plate** with high development latitude)
- IT 134127-48-3  
(IR-absorbing dye; pos.-working **heat sensitive lithog. printing plate** with high development latitude)
- IT 7429-90-5, Aluminum, uses  
(alloy; pos.-working **heat sensitive lithog. printing plate** with high development latitude)
- IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer  
(middle layer and **heat-sensitive layer**; pos.-working **heat sensitive lithog. printing plate** with high development latitude)
- IT 141634-00-6  
(middle layer; pos.-working **heat sensitive lithog. printing plate** with high development latitude)
- IT 220227-02-1 252721-97-4 252721-98-5  
(undercoat; pos.-working **heat sensitive lithog. printing plate** with high development latitude)
- L40 ANSWER 4 OF 10 HCA COPYRIGHT 2006 ACS on STN
- 138:329007 Presensitized **lithography** plates for IR laser direct platemaking with suppressed scum. Kawauchi, Ikuo (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003114519 A2 20030418, 17 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-309942 20011005.
- AB The **lithog.** plate has a **heat-sensitive** layer contg. (A) photothermal converters, (B) aq. alkali-sol. resins bearing phenolic OH, and (C) waxes which suppress scum on developing, represented by compds. bearing 1-6 groups represented by general formula  $R_1YCOXR_2$  ( $X = O, S, NR_3$ ;  $Y = NR_3$ , single bond;  $R_1 = C1-32$  alkylene, arylene;  $R_2, R_3 = H, C1-18$  alkyl, alkenyl, aryl;  $R_1$  and/or  $R_2$  may bear OH,  $CO_2H$ ,  $SO_3H$ , sulfinic acid group,  $PO_3H_2$ , phosphonic acid group).
- IT 216861-97-1  
(undercoat; presensitized **lithog.** plates with

wax-contg. **heat-sensitive** layer for

**IR** laser direct platemaking with suppressed scum)

RN 216861-97-1 HCA

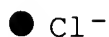
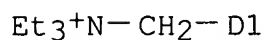
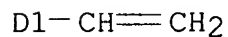
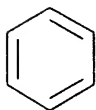
CN Benzenemethanaminium, ar-ethenyl-N,N,N-triethyl-, chloride, polymer  
with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 51241-16-8

CMF C15 H24 N . Cl

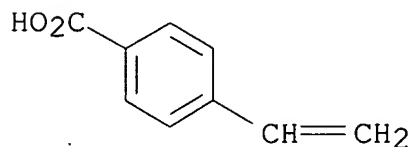
CCI IDS



CM 2

CRN 1075-49-6

CMF C9 H8 O2



IC ICM G03F007-00

ICS C09K003-00; G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38

- ST **lithog** plate IR laser direct platemaking; wax novolak  
**heat sensitive** layer **lithog**;  
presensitized **lithog** plate **heat**  
**sensitive** layer wax; pos IR laser **lithog** plate  
master
- IT Polyurethanes, uses  
(acrylic, fluorine-contg.; presensitized **lithog.** plates  
with wax-contg. **heat-sensitive** layer for  
**IR** laser direct platemaking with suppressed scum)
- IT Fluoropolymers, uses  
(acrylic-polyurethane-; presensitized **lithog.** plates  
with wax-contg. **heat-sensitive** layer for  
**IR** laser direct platemaking with suppressed scum)
- IT Phenolic resins, uses  
(novolak, **heat-sensitive** layer binder;  
presensitized **lithog.** plates with wax-contg.  
**heat-sensitive** layer for **IR** laser  
direct platemaking with suppressed scum)
- IT Cyanine dyes  
(photothermal converter; presensitized **lithog.** plates  
with wax-contg. **heat-sensitive** layer for  
**IR** laser direct platemaking with suppressed scum)
- IT Acrylic polymers, uses  
(polyoxyalkylene-, fluorine-contg., graft; presensitized  
**lithog.** plates with wax-contg. **heat-**  
**sensitive** layer for **IR** laser direct platemaking  
with suppressed scum)
- IT **Lithographic** plates  
(presensitized; presensitized **lithog.** plates with  
wax-contg. **heat-sensitive** layer for  
**IR** laser direct platemaking with suppressed scum)
- IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, Methacrylic acid,  
reactions  
(monomer prepn. from; presensitized **lithog.** plates with  
wax-contg. **heat-sensitive** layer for  
**IR** laser direct platemaking with suppressed scum)
- IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide  
(monomer; presensitized **lithog.** plates with wax-contg.  
**heat-sensitive** layer for **IR** laser  
direct platemaking with suppressed scum)
- IT 134127-48-3  
(photothermal converter; presensitized **lithog.** plates  
with wax-contg. **heat-sensitive** layer for  
**IR** laser direct platemaking with suppressed scum)
- IT 124996-93-6P, Acrylonitrile-(p-aminosulfonylphenyl)methacrylamide-  
ethyl methacrylate copolymer  
(presensitized **lithog.** plates with wax-contg.  
**heat-sensitive** layer for **IR** laser

direct platemaking with suppressed scum)  
 IT 83563-92-2 92739-54-3 451462-65-0 511531-81-0 511531-82-1  
 511531-83-2 511531-84-3 511531-85-4 511531-86-5 511531-87-6  
 511531-88-7 511531-89-8 511531-90-1 511531-91-2 511531-92-3  
 511531-93-4 511531-94-5 511531-96-7

(presensitized **lithog.** plates with wax-contg.

**heat-sensitive** layer for **IR** laser

direct platemaking with suppressed scum)

IT **216861-97-1**

(undercoat; presensitized **lithog.** plates with

wax-contg. **heat-sensitive** layer for

**IR** laser direct platemaking with suppressed scum)

L40 ANSWER 5 OF 10 HCA COPYRIGHT 2006 ACS on STN

138:80726 Aluminum-based original plate for **lithographic** plate  
 and manufacture of the plate. Matsuura, Mutsumi; Uesugi, Akio;  
 Miwa, Hideki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo  
 Koho JP 2003001963 A2 (20030108) 26 pp. (Japanese). CODEN: JKXXAF.  
 APPLICATION: JP 2001-189530 20010622.

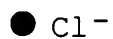
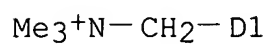
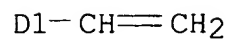
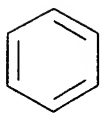
AB The plate involves an Al support and a pos. working **IR**  
 laser-**sensitive** substance layer, whose soly. to a  
 developer is enhanced by IR laser irradiation, on  $\geq 1$  roughened  
 surface of the support. The Al plate is that mech. roughened on  
 $\geq 1$  surface by rubbing by a rotating brush under applying of  
 polishing particles with av. diam. 5-70  $\mu\text{m}$  contg.  $\geq 60$  wt.%  
 SiO<sub>2</sub>, etched, and electrolytically etched in an acidic electrolytic  
 soln. The plate is manufd. by the process involving roughening of  
 the Al support and forming of the **IR** laser-  
**sensitive** layer on the support. The original plate is for  
 laser platemaking to give a **lithog.** plate showing  
 prevention of staining on blanket roll, etc., because the roughened  
 support surface is free from scratches.

IT **214279-68-2P 220227-02-1P**, Triethyl(p-  
 vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer  
**252721-97-4P**, Triethyl(m-vinylbenzyl)ammonium  
 chloride-triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic  
 acid copolymer

(surface-roughened aluminum original **lithog.** plate

ing **IR** laser-**sensitive** layer)

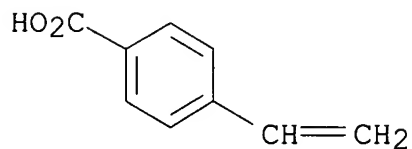
m, ar-ethenyl-N,N,N-trimethyl-, chloride, polymer  
 ic acid (9CI) (CA INDEX NAME)



CM 2

CRN 1075-49-6

CMF C9 H8 O2



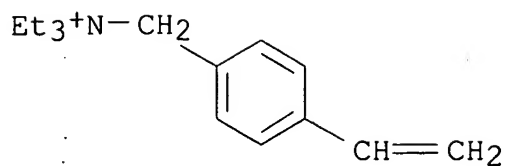
RN 220227-02-1 HCA

CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer  
with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 14350-43-7

CMF C15 H24 N . Cl

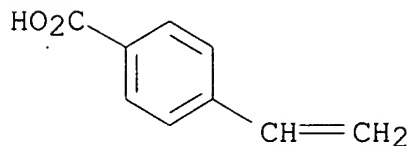


●  $\text{Cl}^-$

CM 2

CRN 1075-49-6

CMF C9 H8 O2

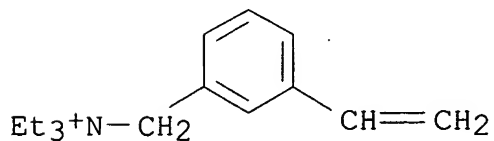


RN 252721-97-4 HCA  
 CN Benzenemethanaminium, 3-ethenyl-N,N,N-triethyl-, chloride, polymer  
 with 4-ethenylbenzoic acid and 4-ethenyl-N,N,N-  
 triethylbenzenemethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

CRN 91277-26-8

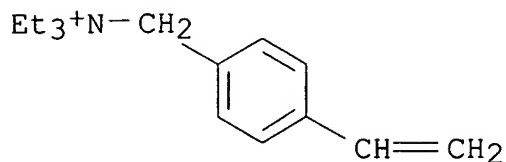
CMF C15 H24 N . Cl



●  $\text{Cl}^-$

CM 2

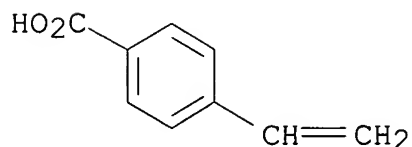
CRN 14350-43-7  
CMF C15 H24 N . Cl



● Cl<sup>-</sup>

CM 3

CRN 1075-49-6  
CMF C9 H8 O2



IC ICM B41N003-04  
ICS B41N001-08; B41N003-03; C25D011-08; C25F003-04; G03F007-00;  
G03F007-004; G03F007-032; G03F007-09  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38, 56  
ST aluminum support **lithog** original plate; mech electrolytic  
surface roughening aluminum support; pos working **IR** laser  
**sensitive** layer; silica particle polishing aluminum surface  
roughening  
IT Anodization  
Electrolysis  
Etching  
Polishing materials  
(for surface roughening of aluminum original **lithog**.  
plate having pos.-working **IR** laser-**sensitive**  
layer)  
IT Brushes  
(rotating; for surface roughening of aluminum original  
**lithog**. plate having pos.-working **IR** laser-



- sensitive layer)**
- IT Laser printers
- Lithographic plates**  
(surface-roughened aluminum original **lithog.** plate having pos.-working **IR laser-sensitive layer)**
- IT 7647-01-0, Hydrochloric acid, uses 7697-37-2, Nitric acid, uses (in electrolytic solns.; for surface roughening of aluminum original **lithog.** plate having pos.-working **IR laser-sensitive layer)**
- IT 63-74-1, p-Aminobenzenesulfonamide 79-41-4, Methacrylic acid, reactions  
(monomer from; for surface-roughened aluminum original **lithog.** plate having pos.-working **IR laser-sensitive layer)**
- IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide (monomer; for surface-roughened aluminum original **lithog.** plate having pos.-working **IR laser-sensitive layer)**
- IT 7631-86-9, Silica, uses  
(particles in polishing material; for surface roughening of aluminum original **lithog.** plate having pos.-working **IR laser-sensitive layer)**
- IT 124996-93-6P, Acrylonitrile-ethyl methacrylate-N-(p-aminosulfonylphenyl)methacrylamide copolymer **214279-68-2P**  
**220227-02-1P**, Triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer **252721-97-4P**, Triethyl(m-vinylbenzyl)ammonium chloride-triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer (surface-roughened aluminum original **lithog.** plate having pos.-working **IR laser-sensitive layer)**
- L40 ANSWER 6 OF 10 HCA COPYRIGHT 2006 ACS on STN  
137:224178 Negative working **lithographic printing plate** master suitable for direct digital platemaking by IR laser. Aoshima, Keitaro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002258467 A2 **20020911**, 22 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-61475 20010306.
- AB The title **lithog. printing plate** master comprises a support, an alkali-developable photosensitive layer contg. a photothermal conversion material and crosslinkable/polymerizable compd., and an overcoat layer contg. a hydrophobic, alkali-sol. polymer. The **printing plate** master shows improved **IR laser sensitivity**, suppressed ablation of the photosensitive layer, and improved ink reception.
- IT **28854-56-0**, Styrene-p-vinylbenzoic acid copolymer (hydrophobic alkali-sol.; in overcoat layer of neg. working **lithog. printing plate** master

suitable for direct digital platemaking by IR laser)

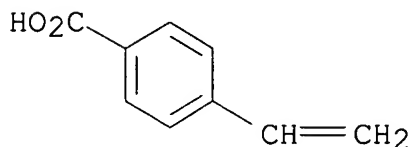
RN 28854-56-0 HCA

CN Benzoic acid, 4-ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 1075-49-6

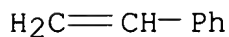
CMF C9 H8 O2



CM 2

CRN 100-42-5

CMF C8 H8



IC ICM G03F007-00

ICS B41N001-14; G03F007-11

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **lithog printing plate** master neg  
working direct digital platemaking; IR laser direct digital  
platemaking **lithog printing plate**  
master

IT Fluoropolymers, uses  
(in alkali-developable photosensitive layer of neg. working  
**lithog. printing plate** master  
suitable for direct digital platemaking by IR laser)

IT **Lithographic** plates  
(neg. working **lithog. printing plate**  
master suitable for direct digital platemaking by IR laser)

IT Photoimaging materials  
(photopolymerizable; neg. working **lithog.**  
**printing plate** master suitable for direct  
digital platemaking by IR laser)

IT 134127-48-3

(IR absorber; in alkali-developable photosensitive layer of neg.  
working **lithog. printing plate**)

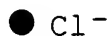
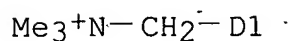
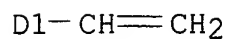
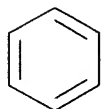
- master suitable for direct digital platemaking by IR laser)
- IT **28854-56-0**, Styrene-p-vinylbenzoic acid copolymer  
457625-40-0, Ethyl methacrylate-monoacryloyloxyethyl succinate copolymer  
(hydrophobic alkali-sol.; in overcoat layer of neg. working **lithog. printing plate** master  
suitable for direct digital platemaking by IR laser)
- IT 85-43-8, Tetrahydrophthalic acid anhydride 104-15-4, p-Toluene sulfonic acid, uses 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 29570-58-9, Dipentaerythritol hexaacrylate 90216-38-9, Allyl methacrylate-methacrylic acid copolymer 207793-01-9  
(in alkali-developable photosensitive layer of neg. working **lithog. printing plate** master  
suitable for direct digital platemaking by IR laser)
- IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer  
(in alkali-developable photosensitive layer of neg. working **lithog. printing plate** master  
suitable for direct digital platemaking by IR laser)
- IT 19600-49-8, Triphenylsulfonium acetate  
(onium salt; in alkali-developable photosensitive layer of neg. working **lithog. printing plate**  
master suitable for direct digital platemaking by IR laser)
- L40 . ANSWER 7 OF 10 HCA COPYRIGHT 2006 ACS on STN  
136:239137 Thermal positive-type **lithographic** plate using anodized aluminum support. Endo, Tadashi (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002082443 A2 **20020322**, 36 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-272895 20000908.
- AB In the material comprising a coarsened and anodized Al support coated with a photosensitive layer whose soly. to an alk. developer changes by heating, the anodized film has micropores with av. size  $\leq 20$  nm and d.  $\geq 300$  no./ $\mu\text{m}^2$ . The material shows high sensitivity.
- IT **214279-68-2P**, p-Vinylbenzoic acid-vinylbenzyltrimethylammonium chloride copolymer **220227-02-1P**, Triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer **252721-97-4P**, Triethyl(m-vinylbenzyl)ammonium chloride-triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer  
(intermediate layer; **heat-sensitive lithog. plate** using anodized aluminum support with size-controlled micropores)
- RN 214279-68-2 HCA  
CN Benzenemethanaminium, ar-ethenyl-N,N,N-trimethyl-, chloride, polymer with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 26616-35-3

CMF C12 H18 N . Cl

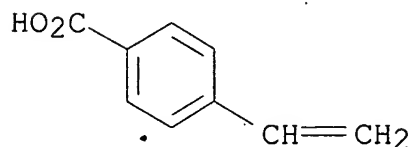
CCI IDS



CM 2

CRN 1075-49-6

CMF C9 H8 O2



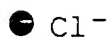
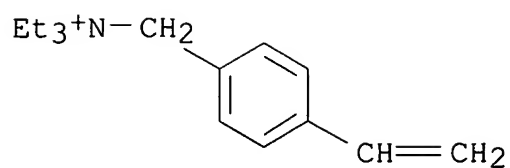
RN 220227-02-1 HCA

CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer  
with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 14350-43-7

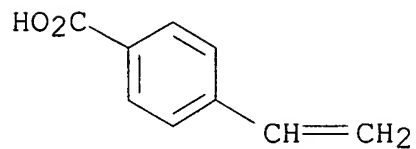
CMF C15 H24 N . Cl



CM 2

CRN 1075-49-6

CMF C9 H8 O2



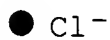
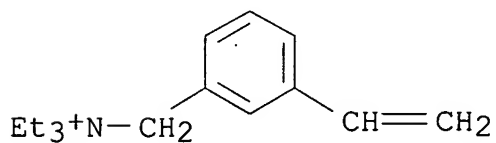
RN 252721-97-4 HCA

CN Benzenemethanaminium, 3-ethenyl-N,N,N-triethyl-, chloride, polymer with 4-ethenylbenzoic acid and 4-ethenyl-N,N,N-triethylbenzenemethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

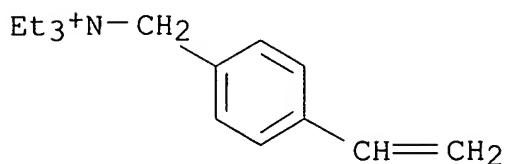
CRN 91277-26-8

CMF C15 H24 N . Cl



CM 2

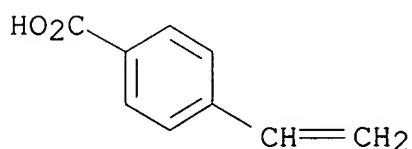
CRN 14350-43-7  
CMF C15 H24 N . Cl



● Cl<sup>-</sup>

CM 3

CRN 1075-49-6  
CMF C9 H8 O2



- IC ICM G03F007-09  
ICS B41N001-08; B41N001-14; B41N003-03; C25D011-04; C25D011-16;  
G03F007-00
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)
- ST aluminum support anodization film micropore **lithog** plate
- IT Anodization  
**Lithographic** plates  
(**heat-sensitive lithog.** plate using  
anodized aluminum support with size-controlled micropores)
- IT Phenolic resins, uses  
(**heat-sensitive lithog.** plate using  
anodized aluminum support with size-controlled micropores)
- IT 62200-40-2  
(**heat-sensitive lithog.** plate using  
anodized aluminum support with size-controlled micropores)
- IT **214279-68-2P**, p-Vinylbenzoic acid-  
vinylbenzyltrimethylammonium chloride copolymer **220227-02-1P**  
, Triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid  
copolymer **252721-97-4P**, Triethyl(m-vinylbenzyl)ammonium

chloride-triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer

(intermediate layer; **heat-sensitive**

**lithog.** plate using anodized aluminum support with size-controlled micropores)

IT 124996-93-6P, Acrylonitrile-N-(p-aminosulfonylphenyl)methacrylamide-ethyl methacrylate copolymer

(photosensitive layer; **heat-sensitive**

**lithog.** plate using anodized aluminum support with size-controlled micropores)

IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer

(photosensitive layer; **heat-sensitive**

**lithog.** plate using anodized aluminum support with size-controlled micropores)

L40 ANSWER 8 OF 10 HCA COPYRIGHT 2006 ACS on STN

132:286344 **IR laser-sensitive** material for planographic **printing plate** preparation.

Kawauchi, Ikuo (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl.

EP 992850 A2 **20000412**, 40 pp. DESIGNATED STATES: R: AT,

BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI,

LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP

1999-119179 19991006. PRIORITY: JP 1998-284617 19981006.

AB An **IR laser-sensitive** material for planog.

**printing plate** prepn. by directly inscribing

digital signals of a computer with an IR laser comprises a substrate having a hydrophilic surface, an intermediate layer contg. a polymer

including a monomer having an acid group and a monomer having an onium group, and a photosensitive layer comprising (A) an

alkali-sol. polymer, (B) a ~~compd. which has a function to reduce the~~

~~soly. of the alkali-sol. polymer in an alk. aq. soln., and (C) a~~

~~compd. which generates heat by absorbing an IR laser light.~~

IT **214279-68-2**

(**IR laser-sensitive** photoimaging materials

for planog. **printing plate** prepn. contg.)

RN 214279-68-2 HCA

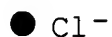
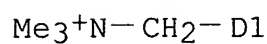
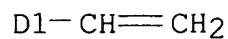
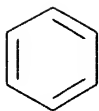
CN Benzenemethanaminium, ar-ethenyl-N,N,N-trimethyl-, chloride, polymer with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 26616-35-3

CMF C12 H18 N . Cl

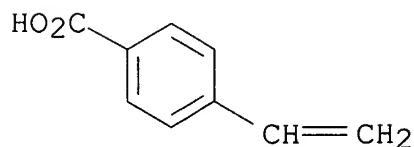
CCI IDS



CM 2

CRN 1075-49-6

CMF C9 H8 O2



IT 220227-02-1P 252721-97-4P 263711-33-7P

(prepn. and use in IR laser-sensitive  
photoimaging materials for planog. printing  
plate prepn.)

RN 220227-02-1 HCA

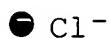
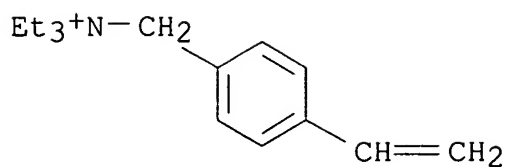
CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer  
with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 14350-43-7

CMF C15 H24 N . Cl

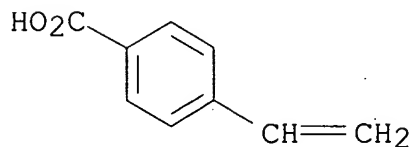




CM 2

CRN 1075-49-6

CMF C9 H8 O2



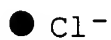
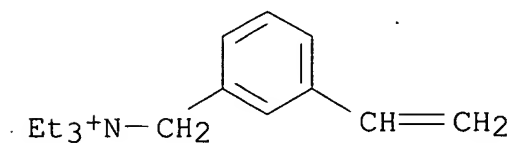
RN 252721-97-4 HCA

CN Benzenemethanaminium, 3-ethenyl-N,N,N-triethyl-, chloride, polymer with 4-ethenylbenzoic acid and 4-ethenyl-N,N,N-triethylbenzenemethanaminium chloride (9CI) (CA INDEX NAME)

CM 1

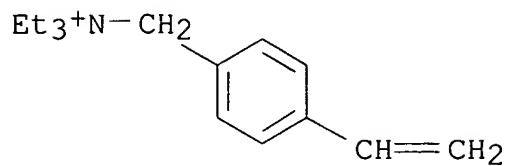
CRN 91277-26-8

CMF C15 H24 N . Cl



CM 2

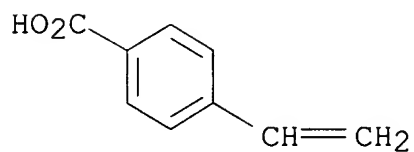
CRN 14350-43-7  
CMF C15 H24 N . Cl



●  $\text{Cl}^-$

CM 3

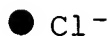
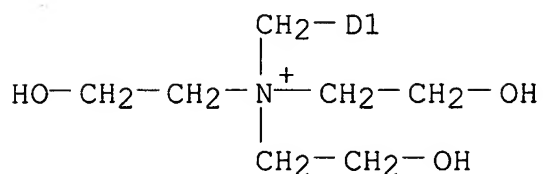
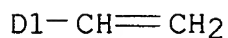
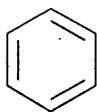
CRN 1075-49-6  
CMF C9 H8 O2



RN 263711-33-7 HCA  
CN Benzenemethanaminium, ar-ethenyl-N,N,N-tris(2-hydroxyethyl)-,  
chloride, polymer with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

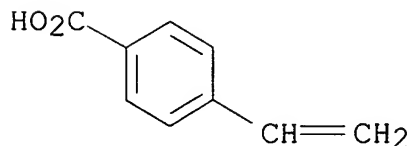
CRN 121122-37-0  
CMF C15 H24 N O3 . Cl  
CCI IDS



CM 2

CRN 1075-49-6

CMF C9 H8 O2



IC ICM G03F007-038  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST **IR laser sensitive** material planog  
**printing plate** prepn  
 IT Photoimaging materials  
 (IR laser-sensitive; for planog.  
**printing plate** prepn.)  
 IT **Lithographic** plates  
 (planog.; **IR laser-sensitive** photoimaging  
 materials for prepn. of)  
 IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer 69415-30-1  
 117283-53-1, Victoria Pure Blue BOH 1-naphthalenesulfonate

154924-50-2 214279-68-2

(**IR** laser-sensitive photoimaging materials  
for planog. **printing plate** prepn. contg.)

IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide  
(prepn. and reaction in prepg. polymers for **IR** laser-  
sensitive photoimaging materials for planog.  
**printing plate** prepn.)

IT 124996-93-6P, Acrylonitrile-ethyl methacrylate-N-(p-  
aminosulfonylphenyl)methacrylamide copolymer **220227-02-1P**  
**252721-97-4P 263711-33-7P**

(prepn. and use in **IR** laser-sensitive  
photoimaging materials for planog. **printing**  
**plate** prepn.)

L40 ANSWER 9<sup>1</sup> OF 10 HCA COPYRIGHT 2006 ACS on STN

130:318614 **IR** laser-sensitive positive photoimaging  
material for offset **printing plate** preparation.

Miyake, Hideo; Kawauchi, Ikuo (Fuji Photo Film Co., Ltd, Japan).

Eur. Pat. Appl. EP 909657 A2 **19990421**, 56 pp. DESIGNATED

STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW.

APPLICATION: EP 1998-119634 19981016. PRIORITY: JP 1997-285754  
19971017; JP 1997-313778 19971114.

AB The title photoimaging material comprises a substrate, a layer (A)  
contg. no less than 50 wt.% of a copolymer which contains, as a  
copolymn. component, no less than 10 mol% of at least one of the  
monomers A-1, A-2, and A-3, wherein A-1 is a monomer having in the  
mol. a sulfonamido group wherein at least one hydrogen atom is  
linked to a nitrogen atom, A-2 is a monomer having in the mol. an  
active imino group represented by the formula -CONHSO<sub>2</sub>-, and A-3 is  
a monomer selected from acrylamide, methacrylamide, acrylates,  
methacrylates, and hydroxystyrene, which resp. have a phenolic  
hydroxyl group, and a layer (B) contg. no less than 50 wt.% . of an  
aq. alkali soln.-sol. resin having a phenolic hydroxyl group. The  
layers A and B are laminated on the substrate in that order. At  
least the layer B contains a compd. which generates heat upon  
absorbing **IR** laser light. The photoimaging material exhibits  
excellent stability of sensitivity with regard to concn. of a  
developing soln.

IT **28391-39-1**

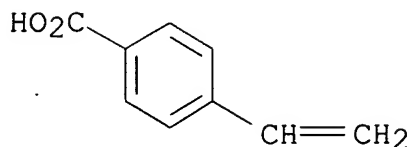
(**IR** laser-sensitive pos. photoimaging  
materials for offset **printing plate** prepn.  
contg.)

RN 28391-39-1 HCA

CN Benzoic acid, 4-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1075-49-6  
CMF C9 H8 O2



- IC ICM B41M005-36  
ICS B41C001-10; G03F007-004
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST IR pos photoimaging material **lithog** plate
- IT Photoimaging materials  
(IR, pos.; for offset **lithog**. plate prepn.)
- IT **Lithographic** plates  
(offset; **IR** laser-**sensitive** pos. photoimaging materials for prepn. of)
- IT 80-09-1 85-43-8 91-04-3, 2,6-Bis(hydroxymethyl)-p-cresol  
104-15-4, uses 127-63-9 1328-54-7, Oil Blue #603 3584-23-4  
5303-25-3, Dodecyl stearate 13249-99-5 27029-76-1,  
m-Cresol-p-cresol-formaldehyde copolymer **28391-39-1**  
28934-28-3, p-Cresol-formaldehyde-phenol copolymer 51241-17-9  
62814-37-3, N-(p-Aminosulfonylphenyl)methacrylamide-methyl  
methacrylate copolymer 65697-21-4, Benzyl methacrylate-methacrylic  
acid copolymer 68584-99-6, Acetone-pyrogallol copolymer  
1,2-naphthoquinonediazido-5-sulfonate 69415-30-1 85568-56-5,  
Megafac F-177 117283-53-1 124737-97-9 134127-48-3  
137909-39-8 223561-66-8 223561-68-0.  
(**IR** laser-**sensitive** pos. photoimaging materials for offset **printing plate** prepn. contg.)
- IT 56992-87-1P, N-(p-Aminosulfonylphenyl)methacrylamide  
(prepn. and reaction in prepg. resins for **IR** laser-**sensitive** pos. photoimaging materials for offset **printing plate** prepn.)
- IT 203179-80-0P, N-(p-Hydroxyphenyl)methacrylamide-ethyl methacrylate  
copolymer 223561-59-9P, N-(p-Aminosulfonylphenyl)methacrylamide-  
ethyl methacrylate copolymer 223561-61-3P, Acrylonitrile-N-(p-  
aminosulfonylphenyl)acrylamide-methyl methacrylate copolymer  
223561-63-5P, Acrylonitrile-methyl methacrylate-N-(p-  
toluenesulfonyl)acrylamide copolymer  
(prepn. and use in **IR** laser-**sensitive** pos. photoimaging materials for offset **printing plate** prepn.)
- IT 63-74-1, p-Aminobenzenesulfonamide 79-10-7, 2-Propenoic acid,

reactions 79-41-4, reactions 541-41-3, Ethyl chloroformate  
(reaction in prepg. resins for **IR** laser-  
**sensitive** pos. photoimaging materials for offset  
**printing plate** prepn.)

L40 ANSWER 10 OF 10 HCA COPYRIGHT 2006 ACS on STN

128:174175 ~~Negative~~-working **IR-sensitive** image  
recording material for **lithographic printing**  
**plate**. Aoshima, Keitaro (Fuji Photo Film Co., Ltd., Japan).  
Jpn. Kokai Tokkyo Koho JP 10016423 A2 **19980120** Heisei,  
29 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-171307  
19960701.

AB The recording material comprises (A)  $\geq 1$  polymer having  
hydroxyaryl groups in side chains, (B) a thermal crosslinking agent,  
(C) an acid generator, and (D) an IR absorber. Preferably, the  
crosslinking agent is a phenol deriv. having hydroxymethyl or  
alkoxymethyl connecting to  $\geq 2$  benzene rings, and the acid  
generator decomp. at  $\geq 100^\circ$ , and the IR absorber  
absorbs light at 720-1200 nm. The recording material is useful for  
direct platemaking by using IR laser. The recording material shows  
high film strength and printability.

IT **202817-59-2P**  
(neg.-working **IR-sensitive** image recording  
material for **lithog. printing plate**  
with high **printability**)

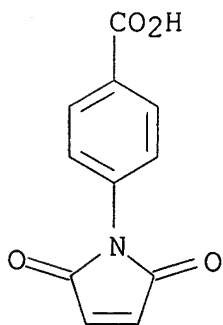
RN 202817-59-2 HCA

CN Benzoic acid, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)-, polymer  
with ethenylbenzene and 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

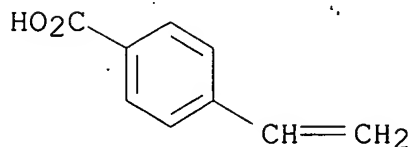
CRN 17057-04-4

CMF C11 H7 N O4



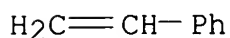
CM 2

CRN 1075-49-6  
CMF C9 H8 O2



CM 3

CRN 100-42-5  
CMF C8 H8



- IC ICM B41N001-14  
ICS B41C001-055; G03F007-00; G03F007-004; G03F007-038
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 25, 38
- ST **IR sensitive recording lithog printing plate**; phenol deriv crosslinking agent  
**lithog printing**; acid generator **lithog printing plate**; hydroxyaryl polymer **IR sensitive resist lithog**
- IT Crosslinking agents  
**Lithographic plates**  
(neg.-working **IR-sensitive** image recording material for **lithog. printing plate** with high **printability**)
- IT Phenolic resins, uses  
(neg.-working **IR-sensitive** image recording material for **lithog. printing plate** with high **printability**)
- IT Polyvinyl acetals  
(neg.-working **IR-sensitive** image recording material for **lithog. printing plate** with high **printability**)
- IT Resists  
(neg.-working, **IR-sensitive**; neg.-working **IR-sensitive** image recording material for **lithog. printing plate** with high **printability**)

IT 22371-56-8, NK 3508  
(IR absorber; neg.-working **IR-sensitive** image  
recording material for **lithog. printing**  
**plate** with high **printability**)

IT 6293-66-9, Diphenyliodonium p-toluenesulfonate 10409-06-0  
22040-25-1 54769-57-2 56530-39-3 130536-25-3 130558-04-2  
175878-37-2 202817-62-7  
(acid generator; neg.-working **IR-sensitive**  
image recording material for **lithog. printing**  
**plate** with high **printability**)

IT 531-18-0, Hexamethylolmelamine 25085-75-0, Bisphenol  
A-formaldehyde copolymer  
(crosslinking agent; neg.-working **IR-sensitive**  
image recording material for **lithog. printing**  
**plate** with high **printability**)

IT 161679-94-3P 161679-95-4P 161679-98-7P 185502-11-8P  
185502-14-1P 185502-15-2P 197087-73-3P 197087-74-4P  
(crosslinking agent; neg.-working **IR-sensitive**  
image recording material for **lithog. printing**  
**plate** with high **printability**)

IT 162846-57-3P  
(crosslinking agent; neg.-working **IR-sensitive**  
image recording material for **lithog. printing**  
**plate** with high **printability**)

IT 173786-82-8DP, hydrolyzed 202817-57-0P 202817-58-1P  
**202817-59-2P** 202817-61-6P  
(neg.-working **IR-sensitive** image recording  
material for **lithog. printing plate**  
with high **printability**)

IT 50-00-0, Formaldehyde, reactions 67-56-1, Methanol, reactions  
110726-28-8, Trisp PA  
(neg.-working **IR-sensitive** image recording  
material for **lithog. printing plate**  
with high **printability**)

=> D HIS L41-

FILE 'REGISTRY' ENTERED AT 14:48:18 ON 13 SEP 2006  
E VINYLBenZOIC ACID/CN

L41 1 S E3  
L42 43 S 30551-66-7/CRN

FILE 'HCA' ENTERED AT 14:49:04 ON 13 SEP 2006

L43 79 S L42  
L44 5 S L43 AND L23  
L45 3 S L43 AND L24



L46 2 S L43 AND L25  
L47 8 S (L44 OR L45 OR L46) NOT (L39 OR L40)  
L48 8 S L47 AND 1840-2002/PRY,PY

=> D L48 1-8 CBIB ABS HITSTR HITIND

L48 ANSWER 1 OF 8 HCA COPYRIGHT 2006 ACS on STN

140:414980 Production of developers for imagewise-exposed presensitized **lithographic** plates. Toyama, Tadao (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004145292 A2 20040520, 19 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2003-293816 20030815. PRIORITY: JP 2002-287150 20020930.

AB In prodn. of the developers, time-course change in elec. cond. of developers (A) upon continuing development and addn. of replenishment developers (B) during the running is monitored until the ratio of B to the sum of A and B becomes 100% so as to det. the final elec. cond. (E) as indicator of developers having acceptable activity, and then new undiluted developers are produced with adjusting their cond. as the same values as E. When the elec. cond. of the developers is approx. the same value as E, the developers can be continuously used.

IT **688803-88-5P**

(in recording layer; prodn. of developer for imagewise-exposed presensitized **lithog.** plates used with supplying replenisher)

RN 688803-88-5 HCA

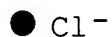
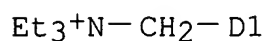
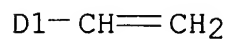
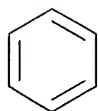
CN Benzenemethanaminium, ar-ethenyl-N,N,N-triethyl-, chloride, polymer with ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 51241-16-8

CMF C15 H24 N . Cl

CCI IDS

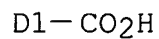
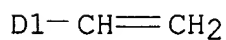
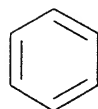


CM 2

CRN 30551-66-7

CMF C9 H8 O2

CCI IDS



IC ICM G03F007-32

ICS G03F007-00

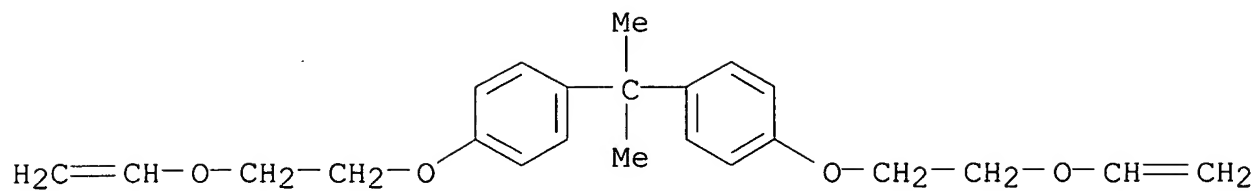
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **lithog printing plate** development  
supply replenisher activity monitoring

IT Phenolic resins, processes  
(in recording layer; prodn. of developer for imagewise-exposed  
presensitized **lithog.** plates used with supplying

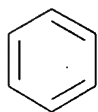
- replenisher)
- IT Electric conductivity  
(of developers, monitoring of; prodn. of developer for  
imagewise-exposed presensitized **lithog.** plates used  
with supplying replenisher)
- IT **Lithographic** plates  
(prodn. of developer for imagewise-exposed presensitized  
**lithog.** plates used with supplying replenisher)
- IT 50-70-4, D-Sorbitol, uses 866-84-2, Tripotassium citrate  
1310-58-3, Potassium hydroxide, uses 1312-76-1, Potassium silicate  
53694-15-8, Polyethylene glycol sorbitol ether 61792-09-4,  
Diethylenetriaminepenta(methylenephosphonic acid) pentasodium salt  
(developer replenisher component; prodn. of developer for  
imagewise-exposed presensitized **lithog.** plates used  
with supplying replenisher)
- IT **688803-88-5P**  
(in recording layer; prodn. of developer for imagewise-exposed  
presensitized **lithog.** plates used with supplying  
replenisher)
- IT 27029-76-1, m-Cresol-p-cresol-formaldehyde copolymer  
(in recording layer; prodn. of developer for imagewise-exposed  
presensitized **lithog.** plates used with supplying  
replenisher)
- L48 ANSWER 2 OF 8 HCA COPYRIGHT 2006 ACS on STN  
126:164302 Manufacture of waterless presensitized **lithographic**  
plate showing high sensitivity. Tsucha, Mitsumasa; Sato, Hironori;  
Kondo, Shunichi (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo  
Koho JP 08328240 A2 **19961213** Heisei, 43 pp. (Japanese).  
CODEN: JKXXAF. APPLICATION: JP 1995-132034 19950530.
- AB The plate includes a photosensitive layer and a silicone rubber  
layer successively laminated on a support, where the photosensitive  
layer is prepd. by applying a coating soln. contg. (A) a compd.  
having  $\geq 2$  enol (thio)ethers of  $R_1(R_2)C:C(R_3)O$  or  
 $R_1(R_2)C:C(R_3)S$  ( $R_1-3 = H, alkyl, aryl$ ), (B) a linear macromol.  
compd. having an acid group and OH or SH, and (C) a photoacid  
generator decompd. with active-beam irradiation or radiation, and  
heating at 60-150° for 30 s-10 min.
- IT **186819-14-7P**  
(photosensitive layer; manuf. of waterless presensitized  
**lithog.** plate contg. enol ether-crosslinked photoresist  
layer)
- RN 186819-14-7 HCA  
CN Benzoic acid, ethenyl-, polymer with ethyl 2-propenoate,  
1,1'-(1-methylethylidene)bis[4-[2-(ethenyloxy)ethoxy]benzene] and  
methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CRN 52411-04-8  
CMF C23 H28 O4



CM 2

CRN 30551-66-7  
CMF C9 H8 O2  
CCI IDS

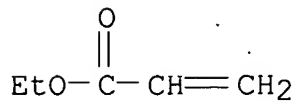


D1-CH=CH2

D1-CO2H

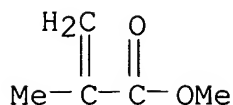
CM 3

CRN 140-88-5  
CMF C5 H8 O2



CM 4

CRN 80-62-6  
CMF C5 H8 O2



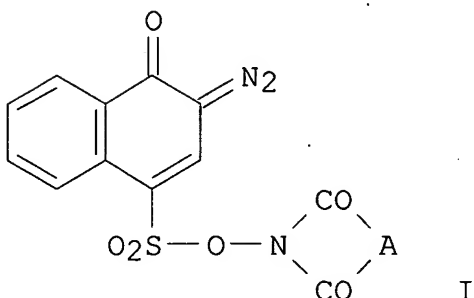
- IC ICM G03F007-00  
ICS G03F007-039
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST waterless presensitized **lithog** plate sensitivity; silicone rubber coating presensitized **lithog** plate; enol ether crosslinking photoresist **lithog** plate
- IT Silicone rubber, preparation  
(di-Me, Me hydrogen; manuf. of waterless presensitized **lithog**. plate contg. enol ether-crosslinked photoresist layer)
- IT Polyvinyl butyrals  
(manuf. of waterless presensitized **lithog**. plate contg. enol ether-crosslinked photoresist layer)
- IT **Lithographic** plates  
(presensitized; manuf. of waterless presensitized **lithog** . plate contg. enol ether-crosslinked photoresist layer)
- IT 557-75-5D, Ethenol, polymers with vinylphenol ethers, polyvinyl butyrals, and vinyl phthalate, reactions 31900-57-9D, Dimethylsilanediol homopolymer, vinyl-terminated 34444-82-1D, polymers with vinylphenol ethers, vinyl alc., and vinyl phthalate 59942-04-0, Dimethylsiloxane, vinyl-terminated 156118-35-3D, Dimethylsilanediol-methylsilanediol copolymer, trimethylsilyl-terminated  
(in prepn. of silicone rubber layer for waterless presensitized **lithog**. plate)
- IT 42573-57-9 71255-80-6 84938-94-3 124737-97-9 137308-86-2  
141425-69-6 186819-12-5  
(photoacid generator; manuf. of waterless presensitized **lithog**. plate contg. enol ether-crosslinked photoresist layer)
- IT 52411-04-8DP, polymers with polyvinyl butyrals, vinyl alc., and vinyl phthalate 160508-63-4P 160508-65-6P 160508-67-8P  
160508-71-4P 186819-13-6P **186819-14-7P** 186819-15-8P  
186819-16-9P 186819-17-0P 186819-18-1P 186819-20-5P  
(photosensitive layer; manuf. of waterless presensitized **lithog**. plate contg. enol ether-crosslinked photoresist layer)
- IT 156118-35-3P, Dimethylsilanediol-methylsilanediol copolymer  
(rubber, coating layer; manuf. of waterless presensitized **lithog**. plate contg. enol ether-crosslinked photoresist

layer)

L48 ANSWER 3 OF 8 HCA COPYRIGHT 2006 ACS on STN

125:100167 Positive type light-sensitive composition for resist patterning. Kondo, Shunichi; Sato, Hironori; Abe, Yukio (Fuji Photo Film Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 08062844 A2 19960308 Heisei, 32 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-193356 19940817.

GI



AB The compn. comprises (a) a 3-dimensionally crosslinkable resin contg. a structural unit OCR1R2O, OCR1R2S, and/or SCR1R2S and (b) a compd. generating an acid by active light beam or radiation. The acid generator may be o-quinonediazide I (A = divalent aliph. or arom. group). The compn. is useful for manuf. of **lithog.** plates, semiconductor circuits, etc.

IT **178696-92-9**

(pos. type light-sensitive compn. for resist patterning)

RN 178696-92-9 HCA

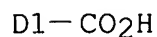
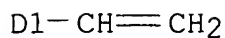
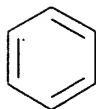
CN Benzoic acid, ethenyl-, polymer with ethyl 2-propenoate and methyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 30551-66-7

CMF C9 H8 O2

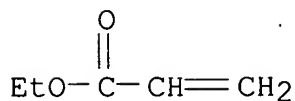
CCI IDS



CM 2

CRN 140-88-5

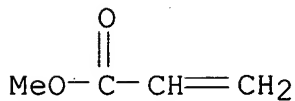
CMF C5 H8 O2



CM 3

CRN 96-33-3

CMF C4 H6 O2



IC ICM G03F007-039  
 ICS G03F003-10; G03F007-00; G03F007-004; G03F007-022; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38, 76  
 IT 25133-97-5, Ethyl acrylate-methacrylic acid-methyl methacrylate  
 copolymer 141655-30-3, Benzyl methacrylate-2-hydroxyethyl  
 methacrylate-methacrylic acid copolymer 172141-06-9D, cyclic  
 acetals with butyraldehyde 178696-91-8 **178696-92-9**  
 178696-93-0  
 (pos. type light-sensitive compn. for resist patterning)

L48 ANSWER 4 OF 8 HCA COPYRIGHT 2006 ACS on STN

121:95626 Temperature-**sensing** variably **heat**

-reflecting multilayer films. Ueda, Kenji (Dai Nippon Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 06011608 A2

**19940121** Heisei, 11 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 1992-170837 19920629.

AB The film comprises an alternating multilayer of a 1st and a 2nd polymer having  $n = n_1(T)$  and  $n_2(T)$  [ $n_1(T) > n_2(T)$ ] and the glass transition temp.  $T_g = T_{g1}$  and  $T_{g2}$  ( $T_{g1} > T_{g2}$ ), resp., wherein when the environmental temp.  $T = T_a$  and  $T_b$  ( $T_a < T_{g2}$  and  $T_{g1} > T_b > T_{g2}$ ), [ $n_1(T_a) - n_2(T_a)$ ] < [ $n_1(T_b) - n_2(T_b)$ ], since  $-dn/dT$  ( $T < T_g$ ) <  $-dn/dT$  ( $T > T_g$ ); and hence the film has a greater reflectivity at  $T_b$  than that at  $T_a$ . The film is suited for use on a window for having a greater heat-reflection in summer and a greater heat-transmission in winter.

IT **9046-31-5**, Polyvinyl benzoic acid

(temp.-dependent variably heat-reflecting polymer multibilayers from)

RN 9046-31-5 HCA

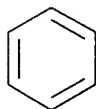
CN Benzoic acid, ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 30551-66-7

CMF C9 H8 O2

CCI IDS



D1-CH=CH<sub>2</sub>

D1-CO<sub>2</sub>H

IC ICM G02B005-18

CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 9003-01-4, Polyacrylic acid **9046-31-5**, Polyvinyl benzoic acid 25087-21-2, Poly(o-methyl styrene) 25249-16-5, Polyhydroxy ethyl methacrylate 156645-75-9 156645-76-0

(temp.-dependent variably heat-reflecting polymer multibilayers from)



L48 ANSWER 5 OF 8 HCA COPYRIGHT 2006 ACS on STN

118:29733 Top surface imaging systems utilizing poly(vinylbenzoic acid) and its ester. Ito, Hiroshi (IBM Res. Div., Almaden Res. Cent., San Jose, CA, 95120, USA). Journal of Photopolymer Science and Technology, 5(1), 123-40 (English) 1992. CODEN: JSTEEW. ISSN: 0914-9244.

AB Applications of poly(p-vinylbenzoic acid) (I) and its tert-Bu ester (II) (opaque <300nm), to deep-UV top surface imaging (TSI) systems were studied. A single-layer neg. TSI based on acid catalyzed deprotection of polymer II using triphenylsulfonium hexafluoroarsenate and triflate, vapor phase silylation using dimethylaminotrimethylsilane and O RIE/development gave the thermally stable 0.5  $\mu$ m line/space images. The I is useful as a strippable bottom layer in an all-dry bilayer, pos. TSI system and, in conjunction with poly(4-trimethylsilylphthalaldehyde), and triphenylsulfonium triflate as thermally-developable top resist.

IT 9046-31-5, Poly(vinylbenzoic acid)  
(**lithog.** top-surface imaging system for deep-UV exposure using photoresists contg.)

RN 9046-31-5 HCA

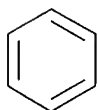
CN Benzoic acid, ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 30551-66-7

CMF C9 H8 O2

CCI IDS



D1-CH=CH<sub>2</sub>

D1-CO<sub>2</sub>H

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST photoresist polyvinylbenzoic acid butyl ester **lithog**

IT 57900-42-2, Triphenylsulfonium hexafluoroarsenate  
(**lithog.** top-surface imaging system for deep-UV exposure using photoresist contg. poly(vinylbenzoic acid) Bu

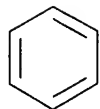
- ester and)
- IT 9046-31-5, Poly(vinylbenzoic acid) 91380-16-4  
(**lithog.** top-surface imaging system for deep-UV exposure using photoresists contg.)
- IT 112265-14-2, Poly(4-trimethylsilylphthalaldehyde)  
(**lithog.** top-surface imaging system for deep-UV exposure using poly(vinylbenzoic acid)-based photoresists and)
- IT 2083-91-2, Dimethylaminotrimethylsilane  
(silylation agent, for top-surface **lithog.** imaging system for deep-UV exposure using photoresists based on poly(vinylbenzoic acid) or its Bu ester)
- L48 ANSWER 6 OF 8 HCA COPYRIGHT 2006 ACS on STN  
112:149087 Electrophotographic material for **lithographic** plate preparation. Kato, Eiichi; Ishii, Kazuo (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 333415 A2 **19890920**, 40 pp.  
DESIGNATED STATES: R: DE, GB. (English). CODEN: EPXXDW.  
APPLICATION: EP 1989-302462 19890314. PRIORITY: JP 1988-58256 19880314; JP 1988-88917 19880413.
- AB An electrophotog. material suited for **lithog.** plate prepn. comprises an elec. conductive support and  $\geq 1$  photoconductive layer contg. photoconductive ZnO particles, a binder resin selected from alkyd resin, silicone resins, epoxy resins, polyesters, poly(vinyl butyrals), methacrylate copolymers, acrylate copolymers, and vinyl acetate polymer, and natural or synthetic hydrophilic resin grains having an av. grain diam. which is the same as or smaller than the max. grain diam. of the ZnO particles. The electrophotog. material is processed by an automatic **printing plate**-making machine to form a toner image and treated with an oil-desensitizing soln. for rendering hydrophilic the nonimage area to give a **lithog. plate** which provides **prints** of good image quality, particularly free background stains, from the start of printing, thus reducing loss of prints.
- IT 9046-31-5  
(zinc oxide electrophotog. compns. contg., for prepn. of **lithog.** plates)
- RN 9046-31-5 HCA
- CN Benzoic acid, ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 30551-66-7

CMF C9 H8 O2

CCI IDS



D1-CH=CH<sub>2</sub>

D1-CO<sub>2</sub>H

- IC ICM G03G013-28  
ICS G03G005-05
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST electrophotog material **lithog** plate prepn; zinc oxide  
electrophotog **lithog** plate; hydrophilic resin  
electrophotog **lithog** plate
- IT Electrophotographic photoconductors  
(contg. zinc oxide and binder resins and hydrophilic resin grains  
for **lithog**. plate prepn.)
- IT **Lithographic** plates  
(zinc oxide electrophotog. compns. contg. hydrophilic resin  
grains for prepn. of)
- IT 1314-13-2, Zinc oxide, uses and miscellaneous  
(electrophotog. materials contg. hydrophilic resin grains and,  
for **lithog**. plate prepn.)
- IT 9003-01-4, Polyacrylic acid 9003-04-7 **9046-31-5**  
9086-70-8 25322-68-3 28062-47-7 37291-07-9D,  
Starch-acrylonitrile copolymer, saponid. 57486-24-5, Aquaprene L  
710 105187-85-7, KI Gel 201K 108688-17-1, Sumikagel SP 510  
(zinc oxide electrophotog. compns. contg., for prepn. of  
**lithog**. plates)
- IT 25213-24-5 25704-18-1 27756-39-4 28062-60-4 29960-84-7  
31212-98-3 51131-63-6 55031-97-5 107052-85-7 124919-84-2  
125052-36-0 125120-19-6 125120-20-9 125120-21-0 125120-23-2  
125120-25-4 125120-26-5 125120-27-6 125120-29-8 125120-66-3  
125193-75-1 125193-77-3 127006-47-7  
(zinc oxide electrophotog. materials contg., for **lithog**  
. plate prepn.)

L48 ANSWER 7 OF 8 HCA COPYRIGHT 2006 ACS on STN

99:13993 Photo- and **heat-sensitive** recording

materials. (Ricoh Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP  
58037640 A2 **19830304** Showa, 7 pp. (Japanese). CODEN:

JKXXAF. APPLICATION: JP 1981-135320 19810828.

AB A basic substance-releasing layer contg. a  $\text{CO}_3^{+}$  ammine and/or amine complex, a chromate, and a chelating agent which shows a small visible absorption on chelation to  $\text{Co}^{3+}$  and a color-forming layer contg. an acidic salt formed between an oxidizable triarylmethane and a strong acid and a hexaarylbiimidazole which, by UV light absorption, acts as a photooxidizing agent for a leuco-aminotriarylmethane are combined to give a high-sensitivity photothermog. material. A redox couple composed of a polycyclic quinone which absorbs 400-500 nm light and a H donor may be used instead of the chromate salt. Thus, a poly(ethylene terephthalate) film was coated with a 8- $\mu\text{m}$  thick basic substance-releasing layer contg.  $[\text{Co}(\text{NH}_3)_6](\text{CCl}_3\text{CO}_2)_2$ ,  $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$ , and hydroxydimethylglyoxime, and then with a 8- $\mu\text{m}$  thick color-forming layer contg. tris(4-dimethylamino-2-methylphenyl)methane, p-toluenesulfonic acid, and 2,2'-bis(o-chlorophenyl)-4,4',5,5'-tetraphenylbiimidazole to give a photothermog. material. The material was patternwise irradiated with a fluorescent lamp for 20 s at an energy of 0.4 mW/cm<sup>2</sup>, heat-developed for 10 s at 100°, and the entire surface was exposed to UV light for 1 min to obtain an image d. of 2.0 and a background d. of 0.4.

IT **81235-36-1**

(photothermog. materials contg.)

RN 81235-36-1 HCA

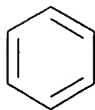
CN Benzoic acid, ethenyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 30551-66-7

CMF C9 H8 O2

CCI IDS



D1-CH=CH<sub>2</sub>

D1-CO<sub>2</sub>H

CM 2

CRN 100-42-5  
CMF C8 H8

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

IC G03C001-72  
CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT 84-11-7 95-45-4 603-48-5 1707-68-2 7789-09-5 25322-68-3  
56619-18-2 59561-55-6 **81235-36-1**  
(photothermog. materials contg.)

L48 ANSWER 8 OF 8 HCA COPYRIGHT 2006 ACS on STN  
80:126770 Electrostatographic liquid developers. (Ricoh Co., Ltd.).  
Brit. GB 1342043 **19731228**, 8 pp. (English). CODEN:  
BRXXAA. APPLICATION: GB 1971-1179 19710111.

AB Developers were manufd. contg. toners of pigment particles coated with three-component graft copolymers. The copolymer stem was insol. in the developer org. carrier liq. and adhered to the dye pigment, one graft component was sol. in the liq. carrier to facilitate dispersal of the toner, and the second graft component was insol. in the carrier and controlled the electrostatic charge on the adherent pigment. The toner particles formed a stable emulsion with the carrier and showed good adhesive properties, allowing ready fixing to the photosensitive surface and, when used in electrophotog. offset **printing**, produced a **plate** of durability equal to those produced by the dry process.. The toner had good transparency minimizing chromatic aberration and resolution deterioration, rendering the toner suitable for multicolor processes. Thus, a mixt. of polystyrene 100, lauryl methacrylate 80, and  $\text{CH}_2:\text{CMeCO}_2(\text{CH}_2)_2\text{NMe}_2$  3 g with 1 g  $\text{Me}_2\text{C}(\text{CN})\text{N}:\text{NC}(\text{CN})\text{Me}_2$  in 65 g PhMe 10 hr at  $110-20^\circ$  gave a graft copolymer which was mixed with a powd. dye and ball milled 10 hr with Naphtha No. 6 to give a toner conc. A 1% dispersion of the toner in Isopar H or G gave a liq. developer giving a neg. charge. Eleven other copolymers were prepd.

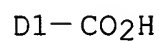
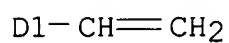
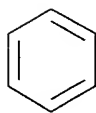
IT **52292-57-6**  
(graft, electrophotog. toners from pigmented, for liq. developers)

RN 52292-57-6 HCA

CN Benzoic acid, ethenyl-, polymer with ethenyl tetradecanoate, (1-methylethenyl)benzene and 2-methylpropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

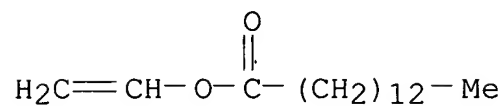
CM 1

CRN 30551-66-7  
CMF C9 H8 O2  
CCI IDS



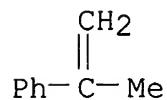
CM 2

CRN 5809-91-6  
CMF C16 H30 O2



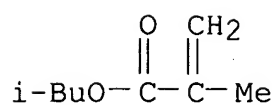
CM 3

CRN 98-83-9  
CMF C9 H10



CM 4

CRN 97-86-9  
CMF C8 H14 O2



IC G03G; C08F

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

Section cross-reference(s): 35

IT 30870-67-8 51998-55-1 51998-56-2 51998-57-3 51998-58-4  
51998-59-5 51998-60-8 52292-23-6 52292-53-2 52292-54-3  
52292-56-5 **52292-57-6**

(graft, electrophotog. toners from pigmented, for liq. developers)